TITLE 327 WATER POLLUTION CONTROL DIVISION

SECOND NOTICE OF COMMENT PERIOD
LSA Document #14-59

REVISED TOTAL COLIFORM RULE

PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) is soliciting public comment on its intent to amend and add rules concerning revisions adopted by the United States Environmental Protection Agency (U.S. EPA) to the Total Coliform Rule (TCR) under the Safe Drinking Water Act (SDWA) and corrections requested by U.S. EPA to the Ground Water Rule (GWR) and Stage 2 Disinfectants and Disinfection Byproducts (Stage 2) rules that were previously adopted. IDEM seeks comment on the affected citations listed and any other provisions of Title 327 that may be affected by this rulemaking.

HISTORY

First Notice of Comment Period: March 5, 2014, Indiana Register (DIN: 20140305- IR-327140059FNA).

CITATIONS AFFECTED: 327 IAC 8-2-7; 327 IAC 8-2-8; 327 IAC 8-2-8.1; 327 IAC 8-2-8.2; 327 IAC 8-2-8.3; 327 IAC 8-2-8.4; 327 IAC 8-2-8.8; 327 IAC 8-2-13; 327 IAC 8-2-31; 327 IAC 8-2.1-3; 327 IAC 8-2.1-6; 327 IAC 8-2.1-8; 327 IAC 8-2.1-9; 327 IAC 8-2.1-10; 327 IAC 8-2.1-16; 327 IAC 8-2.1-17; 327 IAC 8-2.3-4; 327 IAC 8-2.3-7; 327 IAC 8-2.4; 327 IAC 8-2.5-6.

AUTHORITY: IC 13-13-5; IC 13-14-8; IC 13-14-9; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9.

SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING

Basic Purpose and Background

The U.S. EPA published final revisions to the 1989 TCR in the Federal Register (FR) on February 13, 2013 (78 FR 10346), and technical corrections to the final rule revisions were published on February 26, 2014 (79 FR 10668). The Revised Total Coliform Rule (RTCR) offers a meaningful opportunity for greater public health protection beyond the 1989 TCR. Under the RTCR, there is no longer a monthly maximum contaminant level (MCL) violation for multiple total coliform detections. Instead, the revisions require public water systems (PWSs) that have an indication of coliform contamination in the distribution system to assess the problem and take corrective action that may reduce cases of illnesses and deaths due to potential fecal contamination and waterborne pathogen exposure. The final rule revision also updates provisions in other rules that reference analytical methods and other requirements in the 1989 TCR. These include minor revisions being made in the GWR and the Stage 2 rule to correct items U.S. EPA believes need corrected to make IDEM's rules as stringent as the federal rules. The revisions are in accordance with the 1996 SDWA Amendments that require U.S. EPA to review and revise, as appropriate, each national primary drinking water regulation not less often than every six years. These revisions also conform to the SDWA provision that requires any revision to "maintain, or provide for greater protection of the health of persons". As with the 1989 TCR, the RTCR applies to all PWSs.

IDEM seeks comment on the affected citations listed, including suggestions for specific language, any other provisions of Title 327 that may be affected by this rulemaking, and alternative ways to achieve the purpose of the rulemaking.

IC 13-14-9-4 Identification of Restrictions and Requirements Not Imposed under Federal Law

No element of the draft rule imposes either a restriction or a requirement on persons to whom the draft rule applies that is not imposed under federal law.

Potential Fiscal Impact

The proposed revisions to the total coliform rule are based on the federal rule that implements the SDWA. This rulemaking to adopt into state rule the federally required revisions to the TCR creates no fiscal impact beyond the federal requirements that PWSs are required to meet even in the absence of state rules. If IDEM does not amend the state rules to include the federally required changes to the TCR, there would be the potential for loss of federal funding to the state's drinking water program and regulated entities would still be required to comply with the federal standards.

Public Participation and Work Group Information

At this time, no work group is planned for the rulemaking. If you feel that a work group or other informal discussion on the rule is appropriate, please contact MaryAnn Stevens, Rules Development Branch, Office of Legal Counsel at (317) 232-8635 or (800) 451-6027 (in Indiana).

SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD

IDEM requested public comment from March 5, 2014, through April 4, 2014, on alternative ways to achieve

the purpose of the rule and suggestions for the development of draft rule language. IDEM received no comments in response to the First Notice of Comment Period.

REQUEST FOR PUBLIC COMMENTS

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Comments may be submitted in one of the following ways:

(1) By mail or common carrier to the following address:
LSA Document #14-59 TCR Revisions
MaryAnn Stevens
Rules Development Branch
Office of Legal Counsel
Indiana Department of Environmental Management
Indiana Government Center North
100 North Senate Avenue
Indianapolis, IN 46204-2251

(2) By facsimile to (317) 233-5970. Please confirm the timely receipt of faxed comments by calling the Rules Development Branch at (317) 232-8922.

(3) By electronic mail to mstevens@idem.in.gov. To confirm timely delivery of submitted comments, please request a document receipt when sending the electronic mail. **PLEASE NOTE: Electronic mail comments will NOT be considered part of the official written comment period unless they are sent to the address indicated in this notice.**

(4) Hand delivered to the receptionist on duty at the thirteenth floor reception desk, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Indianapolis, Indiana.

Regardless of the delivery method used, to properly identify each comment with the rulemaking action it is intended to address, each comment document must clearly specify the LSA document number of the rulemaking.

COMMENT PERIOD DEADLINE

All comments must be postmarked, faxed, or time stamped not later than June 10, 2016. Hand-delivered comments must be delivered to the appropriate office by 4:45 p.m. on the above-listed deadline date.

Additional information regarding this action may be obtained from MaryAnn Stevens, Rules Development Branch, Office of Legal Counsel, (317) 232-8635 or (800) 451-6027 (in Indiana) or Stacy Jones, Technical Environmental Specialist/Regulatory Development, Office of Water Quality, Drinking Water Branch, (317) 234-7454 or (800) 451-6027 (in Indiana).

DRAFT RULE

SECTION 1. 327 IAC 8-2-7 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-7 Microbiological contaminants; maximum contaminant levels for all PWSs

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 7. (a) **Until March 31, 2016,** the ~~microbiological~~ **total coliform** MCL applies to all ~~public water systems~~ **PWSs** and is based on the presence or absence of total coliforms in a sample, rather than coliform density. ~~For a system:~~ **The PWS is in compliance with the MCL for total coliforms if it meets the following:**

(1) ~~which collects at least forty (40) samples per month, if no~~ **Not** more than five **and zero-tenths** percent ~~(5%)~~ **(5.0%)** of the samples collected during a month are total coliform-positive ~~the system is in compliance with the MCL for total coliforms; or~~ **for a PWS that collects at least forty (40) samples per month.**

(2) ~~which collects fewer than forty (40) samples per month, if no~~ **Not** more than one (1) sample collected during a month is total coliform-positive ~~the system is in compliance with the MCL for total coliforms.~~ **for a PWS that collects fewer than forty (40) samples per month.**

(b) **Until March 31, 2016,** any **of the following constitutes a violation of the MCL for total coliforms:**

(1) A fecal coliform-positive repeat sample. ~~or~~

(2) An E. coli-positive repeat sample. ~~or any~~

(3) A total coliform-positive repeat sample following a fecal coliform-positive or E. coli-positive routine sample. ~~constitutes a violation of the MCL for total coliforms.~~

For purposes of the public notification requirements in 327 IAC 8-2.1-7 through 327 IAC 8-2.1-16, ~~this is a violation that~~ **the violations described in subdivisions (1) through (3)** may pose an acute risk to health.

(c) Beginning April 1, 2016, a PWS:
(1) is in compliance with the MCL for E. coli for samples taken in accordance with 40 CFR 141, Subpart Y*, unless one (1) or more of the conditions identified in subdivision (2) occurs; and
(2) shall follow the public notification requirements in 327 IAC 8-2.1-7 through 327 IAC 8-2.1-16 for violations of the MCL that may pose an acute risk to human health when a PWS:
(A) has an E. coli-positive repeat sample following a total coliform-positive routine sample;
(B) has a total coliform-positive repeat sample following an E. coli-positive routine sample;
(C) fails to take all required repeat samples following an E. coli-positive routine sample; or
(D) fails to test for E. coli when any repeat sample tests positive for total coliform.

~~(c)~~ **(d)** A ~~public water system must~~ **PWS shall** determine compliance with the MCL for **the following:**
(1) Total coliforms ~~in~~ **according to** subsections (a) and (b) **until March 31, 2016,** for each month in which ~~it~~ **the PWS** is required to monitor for total coliforms.
(2) E. coli according to subsection (c) beginning April 1, 2016, for each month in which the PWS is required to monitor for total coliforms.

~~(d)~~ **(e)** The following are BAT, **treatment techniques, or other means available** for achieving compliance with the MCL for total coliforms in subsections (a) and (b) **and the MCL for E. coli in subsection (c)(2)(A):**
(1) Protection of wells from ~~coliform~~ **fecal** contamination by appropriate placement and construction.
(2) Maintenance of a disinfectant residual throughout the distribution system.
(3) Proper maintenance of the distribution system, including **the following:**
(A) Appropriate pipe replacement and repair procedures.
(B) Main flushing programs.
(C) Proper operation and maintenance of storage tanks and reservoirs. ~~and~~
(D) Cross connection control.
(E) Continual maintenance of positive water pressure in all parts of the distribution system.
(4) **Either or both of the following:**
(A) As described in sections 8.5 and 8.6 of this rule, either or both of the following:
(i) Filtration ~~and/or disinfection~~ of surface water. ~~as described in sections 8.5 and 8.6 of this rule, or~~
(ii) Disinfection of surface water.
(B) Disinfection of ground water, **as described in 40 CFR 141, Subpart Y*,** using strong oxidants such as **one (1) or more of the following:**
(i) Chlorine.
(ii) Chlorine dioxide. ~~or~~
(iii) Ozone.
(5) For ~~systems~~ **a PWS** using ground water, compliance with the requirements of ~~an~~ **a U.S.** EPA approved wellhead protection program developed and implemented under ~~Section 1428 of the Safe Drinking Water Act.~~ **327 IAC 8-4.1.**

(f) For a PWS serving ten thousand (10,000) or fewer people, the commissioner, according to Section 1412 of the SDWA, shall identify the technology, treatment techniques, or other means available identified in subsection (e) as affordable technology, treatment techniques, or other means available for achieving compliance with the MCL for:
(1) total coliforms in subsections (a) and (b); and
(2) E. coli in subsection (c).

***This document is incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Thirteenth Floor, Indianapolis, Indiana 46204.**

(Water Pollution Control Division; 327 IAC 8-2-7; filed Sep 24, 1987, 3:00 p.m.: 11 IR 707; filed Dec 28, 1990, 5:10 p.m.: 14 IR 1018; filed Apr 12, 1993, 11:00 a.m.: 16 IR 2154; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1092)

SECTION 2. 327 IAC 8-2-8 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-8 Collection of samples for total coliform bacteria testing

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 8. (a) ~~Public water systems~~ **A PWS** must collect total coliform samples at sites that are representative of water throughout the distribution system:

(1) according to a written sample siting plan approved by the commissioner; **and**

(2) beginning on April 1, 2016, each PWS, based on the population served by the PWS, must meet the monitoring requirements of 40 CFR 141, Subpart Y*.

(b) The monitoring frequency for total coliforms for ~~community water systems~~ **a CWS** is based on the population served by the ~~system~~ **CWS** and ~~shall be~~ **is required through March 31, 2016,** as follows unless the commissioner determines that more frequent sampling is appropriate:

TOTAL COLIFORM MONITORING FREQUENCY FOR COMMUNITY WATER SYSTEMS

Population Served		Minimum Number of Samples Per Month
25	to 1,000[1]	1
1,001	to 2,500	2
2,501	to 3,300	3
3,301	to 4,100	4
4,101	to 4,900	5
4,901	to 5,800	6
5,801	to 6,700	7
6,701	to 7,600	8
7,601	to 8,500	9
8,501	to 12,900	10
12,901	to 17,200	15
17,201	to 21,500	20
21,501	to 25,000	25
25,001	to 33,000	30
33,001	to 41,000	40
41,001	to 50,000	50
50,001	to 59,000	60
59,001	to 70,000	70
70,001	to 83,000	80
83,001	to 96,000	90
96,001	to 130,000	100
130,001	to 220,000	120
220,001	to 320,000	150
320,001	to 450,000	180
450,001	to 600,000	210
600,001	to 780,000	240
780,001	to 970,000	270
970,001	to 1,230,000	300
1,230,001	to 1,520,000	330

[1]Includes ~~public water systems~~ **PWSs** that have at least fifteen (15) service connections but serve fewer than twenty-five (25) persons.

If a ~~community water system~~ **CWS** serving twenty-five (25) to one thousand (1,000) persons has no history of total coliform contamination in its current configuration and a sanitary survey conducted in the past five (5) years shows that the ~~system~~ **CWS** is supplied solely by a protected ground water source and is free of sanitary defects, the commissioner may reduce the monitoring frequency specified in this subsection, in writing, except that in no case may the commissioner reduce the monitoring frequency to less than one (1) sample per quarter.

(c) The monitoring frequency for total coliforms for ~~noncommunity water systems~~ **a NCWS** is **required through March 31, 2016,** as follows:

(1) A ~~noncommunity water system (A)~~ **NCWS** using only ground water (except ground water under the direct influence of surface water, as defined in section ~~1(36)~~ **1(45)** of this rule) ~~and (B) serving~~ **that serves:**

(A) one thousand (1,000) or fewer persons:

(i) must monitor each calendar quarter that the ~~system~~ **NCWS** provides water to the public; ~~except that the commissioner~~ **and**

(ii) may ~~reduce this monitoring~~ **monitor under a reduced** frequency **allowed** in writing **by the commissioner** if:

(AA) a sanitary survey shows that the ~~system~~ **NCWS** is free of sanitary defects; ~~Beginning June 29, 1994, the commissioner shall not reduce the monitoring frequency for a noncommunity water system using only ground water (except ground water under the direct influence of surface water, as defined in section 1(36) of this rule) and serving one thousand (1,000) or fewer persons to~~ **and**

(BB) not less than once per year ~~(2) A noncommunity water system: (A) using only ground water (except ground water under the direct influence of surface water, as defined in section 1(36) of this rule);~~ **monitoring is conducted after June 29, 1994;** and

(B) ~~serving~~ more than one thousand (1,000) persons during any month:

(i) must monitor at the same frequency as a like-sized ~~community water system,~~ **CWS,** as specified in subsection (b); ~~except the commissioner~~ **and**

(ii) may ~~reduce this monitoring~~ **monitor under a reduced** frequency **allowed** in writing **by the commissioner** for:

(AA) any month the ~~system~~ **NCWS** serves one thousand (1,000) or fewer persons; ~~The commissioner shall not reduce the monitoring frequency to~~ **and**

(BB) not less than once per year **monitoring.**

For ~~systems~~ **a NCWS** using ground water under the direct influence of surface water, subdivision ~~(4)~~ **(3)** applies.

~~(3)~~ **(2)** A ~~noncommunity water system~~ **NCWS** using surface water, in total or in part, must monitor at the same frequency as a like-sized ~~community water system,~~ **CWS,** as specified in subsection (b), regardless of the number of persons it serves.

~~(4)~~ **(3)** A ~~noncommunity water system~~ **NCWS** using ground water under the direct influence of surface water, as defined in section ~~1(36)~~ **1(45)** of this rule, must monitor at the:

(A) same frequency as a like-sized ~~community water system~~ **CWS** specified in subsection (b); ~~The system must begin monitoring at this~~ **and**

(B) frequency **under clause (A)** beginning six (6) months after the commissioner determines that the ground water is under the direct influence of surface water.

(d) The ~~public water system~~ **PWS** must collect samples **through March 31, 2016,** at regular time intervals throughout the month, except a ~~system~~ **PWS** that:

(1) uses only ground water (except ground water under the direct influence of surface water, as defined in section ~~1(36)~~ **1(45)** of this rule); and

(2) serves four thousand nine hundred (4,900) persons or fewer;

may collect all required samples on a single day if they are taken from different sites.

(e) **Through March 31, 2016,** special purpose samples, such as those taken to determine whether disinfection practices are sufficient following pipe placement, replacement, or repair, ~~shall~~ **must** not be used to determine compliance with the MCL for total coliforms in section 7 of this rule. Repeat samples taken under section 8.1 of this rule:

(1) are not considered special purpose samples; and

(2) must be used to determine compliance with the MCL for total coliforms required by section 7 of this rule.

Any sample not designated as special purpose before analysis by the laboratory ~~shall~~ **must** be used to determine compliance with the MCL for total coliforms in section 7 of this rule.

(f) **The provisions of this subsection are applicable until all required repeat monitoring under section 8.1 of this rule and fecal coliform or E. coli testing required under section 8.3 of this rule that was initiated by a total coliform positive sample taken before April 1, 2016, is completed as well as analytical method, reporting, record keeping, public notification, and consumer confidence report requirements associated with that monitoring and testing.** A total coliform-positive sample invalidated under this subsection does not count towards meeting the minimum monitoring requirements of this section. The total coliform-positive sample may be invalidated only if the following conditions are met:

(1) The laboratory establishes that improper sample analysis caused the total coliform-positive result.

(2) The commissioner, on the basis of the results of repeat samples collected as required by section 8.1(a) through 8.1(d) of this rule, determines that the total coliform-positive sample resulted from a domestic or other nondistribution system plumbing problem. The commissioner cannot invalidate a:

(A) sample on the basis of repeat sample results unless all repeat samples collected:

~~(A)~~ **(i)** at the same tap as the original total coliform-positive sample are also total coliform-positive; and
~~(B)~~ **(ii)** within five (5) service connections of the original tap are total coliform-negative; ~~For example, the commissioner cannot invalidate a~~ **and**

(B) total coliform-positive sample on the basis of repeat samples if:
(i) all the repeat samples are total coliform-negative; or ~~if~~
(ii) the ~~public water system~~ **PWS** has only one (1) service connection.

(3) The commissioner has substantial grounds to believe that a total coliform-positive result is due to a circumstance or condition that does not reflect water quality in the distribution system. In this case, the ~~system~~ **PWS** must still collect all repeat samples required by section 8.1(a) through 8.1(d) of this rule and use them to determine compliance with the MCL for total coliforms in section 7 of this rule. To invalidate a total coliform-positive sample under this subsection, the decision must be documented, in writing, and approved and signed by the supervisor of the state official who recommended the decision. The commissioner ~~must~~ **shall** make this document available to **U.S.** EPA and the public. The written documentation must state the following:

(A) The specific cause of the total coliform-positive sample.
(B) What action the ~~system~~ **PWS** has taken, or will take, to correct this problem.

The commissioner may not invalidate a total coliform-positive sample solely on the grounds that all repeat samples are total coliform-negative.

(4) A laboratory must invalidate a total coliform sample, unless total coliforms are detected, if the sample:

(A) produces a turbid culture in the absence of:
(i) gas production using an analytical method where gas formation is examined, for example, the multiple-tube fermentation technique; or
(ii) an acid reaction in the presence-absence (P-A) coliform test; or

(B) exhibits confluent growth or produces colonies too numerous to count with an analytical method using a membrane filter, for example, the membrane filter technique.

If a laboratory invalidates a sample because of ~~such~~ interference **as described in this subdivision,** the ~~system~~ **PWS** must collect another sample from the same location as the original sample within twenty-four (24) hours of being notified of the interference problem and have it analyzed for the presence of total coliforms. The ~~system~~ **PWS** must continue to resample within twenty-four (24) hours and have the samples analyzed until it obtains a valid result. The commissioner may waive the twenty-four (24) hour time limit on a case-by-case basis.

(g) Beginning on April 1, 2016, the provisions of 40 CFR 141, Subpart Y*, are applicable, with a PWS required to begin monitoring at the same frequency as the PWS-specific frequency required on March 31, 2016.

***This document is incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Thirteenth Floor, Indianapolis, Indiana 46204.**

(Water Pollution Control Division; 327 IAC 8-2-8; filed Sep 24, 1987, 3:00 p.m.: 11 IR 707; filed Dec 28, 1990, 5:10 p.m.: 14 IR 1019; errata filed Jan 9, 1991, 2:30 p.m.: 14 IR 1070; errata filed Aug 6, 1991, 3:45 p.m.: 14 IR 2258; filed Apr 12, 1993, 11:00 a.m.: 16 IR 2155; filed Jul 23, 2001, 1:02 p.m.: 24 IR 3965; filed Jul 13, 2007, 11:58 a.m.: 20070808-IR-327060044FRA)

SECTION 3. 327 IAC 8-2-8.1 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-8.1 Repeat monitoring for total coliform bacteria

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 8.1. (a) If a routine sample is total coliform-positive, the ~~public water system~~ **PWS** must collect a set of repeat samples within twenty-four (24) hours of being notified by the laboratory or the commissioner of the positive result. **The provisions of this section are applicable until all required repeat monitoring under this section and fecal coliform or E. coli testing required under section 8.3 of this rule that was initiated by a total coliform positive sample taken before April 1, 2016, is completed as well as analytical method, reporting, record keeping, public notification, and consumer confidence report requirements associated with that monitoring and testing. The following apply to repeat monitoring:**

(1) A ~~system which~~ **PWS that** collects:

(A) more than one (1) routine sample per month must collect no fewer than three (3) repeat samples for each total coliform-positive sample found; ~~A system which collects~~ **or**

(B) one (1) routine sample per month or fewer must collect no fewer than four (4) repeat samples for each total coliform-positive sample found.

(2) The commissioner may extend the twenty-four (24) hour limit up to forty-eight (48) hours on a case-by-case basis if the ~~system~~ **PWS** has a problem beyond its control in collecting the repeat samples within twenty-four (24) hours.

(3) The ~~system~~ **PWS** must have:

(A) sufficient sample bottles on hand to collect any required repeat samples within twenty-four (24) hours of notification by the laboratory or the commissioner; or ~~must have~~

(B) the ability to acquire sample bottles and collect samples within twenty-four (24) hours of:

(i) notification by the laboratory or the commissioner; or

(ii) a positive total coliform sample.

(b) The ~~system~~ **PWS** must collect at least one (1) repeat sample from the **following locations:**

(1) The sampling tap where the original total coliform-positive sample was taken. ~~at least one (1) repeat sample at~~

(2) A tap within five (5) service connections upstream ~~and at least one (1) repeat sample at~~ **of the original sampling site.**

(3) A tap within five (5) service connections downstream of the original sampling site.

If a total coliform-positive sample is at the end of the distribution system, or one (1) **service connection** away from the end of the distribution system, the commissioner may waive the requirement to collect at least one (1) repeat sample upstream or downstream of the original sampling site.

(c) The ~~system~~ **PWS** must collect all repeat samples on the same day, except that the commissioner may allow a ~~system~~ **PWS** with a single service connection to collect:

(1) the required set of repeat samples over a four (4) day period; or ~~to collect~~

(2) a larger volume of repeat samples in one (1) or more sample containers of any size, as long as the total volume collected is at least:

(A) four hundred (400) milliliters; or

(B) three hundred (300) milliliters for ~~systems which collect~~ **a PWS that collects** more than one (1) routine sample per month.

(d) If one (1) or more repeat samples in the set is total coliform-positive, the ~~public water system~~ **PWS** must **do the following:**

(1) Collect an additional set of repeat samples, in the manner specified in subsections (a) through (c), ~~The additional samples must be collected~~ within twenty-four (24) hours of being notified of the positive result, unless the commissioner extends the limit as provided in subsection ~~(a). The system must~~ **(a)(2).**

(2) Repeat ~~this~~ **the** process **of collecting additional repeat samples required under subdivision (1)** until either:

(A) total coliforms are not detected in one (1) complete set of repeat samples; or

(B) the ~~system:~~ **PWS:**

(i) determines that the MCL for total coliforms in section 7 of this rule has been exceeded; and

(ii) notifies the commissioner.

(e) If a ~~system~~ **PWS** collecting fewer than five (5) routine samples per month has one (1) or more total coliform-positive samples, and the commissioner does not invalidate the samples under section 8(f) of this rule, ~~it~~ **the PWS** must collect at least five (5) routine samples during the next month the ~~system~~ **PWS** provides water to the public, except that the commissioner may waive this requirement **to collect five (5) routine samples the next month the PWS provides water to the public** if the following conditions are met:

(1) The commissioner, ~~may waive the requirement to collect five (5) routine samples the next month the system provides water to the public if the commissioner,~~ or an agent approved by the commissioner, performs a site visit before the end of the next month the ~~system~~ **PWS** provides water to the public. Although a sanitary survey need not be performed, the site visit must be sufficiently detailed to allow the commissioner to determine whether additional monitoring or any corrective action or both is needed. An employee of the ~~system shall~~ **PWS may** not ~~be approved to~~ perform this site visit.

(2) The commissioner ~~may waive the requirement to collect five (5) routine samples the next month the system provides water to the public if the commissioner~~ has determined why the sample was total coliform-positive

and establishes that the ~~system~~ **PWS** has corrected the problem or will correct the problem before the end of the next month the ~~system~~ **PWS** serves water to the public. In this case, the **following must be met:**

(A) The decision to waive the following month's additional monitoring requirement must be:

(i) documented in writing;

(ii) approved and signed by the supervisor of the state official who recommends ~~such a~~ **the** decision; and

(iii) made available to the:

(AA) U.S. EPA; and

(BB) public.

(B) The written documentation **required under clause (A)(i)** must describe:

(i) the specific cause of the total coliform-positive sample; and

(ii) what action the ~~system~~ **PWS** has taken or will take to correct this problem.

(C) The requirement to collect five (5) routine samples the next month the ~~system~~ **PWS** provides water to the public cannot be waived solely on the grounds that all repeat samples are total coliform-negative.

(D) Under this subdivision, a ~~system~~ **PWS** must still take at least one (1) routine sample before the end of the next month ~~it~~ **the PWS** serves water to the public and use ~~it~~ **the routine sample** to determine compliance with the MCL for total coliforms in section 7 of this rule, unless the commissioner has determined that:

(i) the ~~system~~ **PWS** has corrected the contamination problem before the ~~system~~ **PWS** took the set of repeat samples required in subsections (a) through (d); and

(ii) all repeat samples were total coliform-negative.

(E) The commissioner shall not waive the requirement for a ~~system~~ **PWS** to collect repeat samples in subsections (a) through (d).

(f) After a ~~system~~ **PWS** collects a routine sample and before ~~it~~ **the PWS** learns the results of the analysis of that sample, if ~~it~~ **the PWS** collects another routine sample from within five (5) adjacent service connections of the initial sample, and the initial sample, after analysis, is found to contain total coliforms, then the ~~system~~ **PWS** may count the subsequent ~~samples~~ **sample** as a repeat sample instead of as a routine sample.

(g) Results of all routine and repeat samples not invalidated by the commissioner must be included in determining compliance with the MCL for total coliforms in section 7 of this rule. Any sample not designated as special purpose prior to analysis by the laboratory ~~shall~~ **must** be used to determine compliance with the MCL for total coliforms in section 7 of this rule.

(Water Pollution Control Division; 327 IAC 8-2-8.1; filed Dec 28, 1990, 5:10 p.m.: 14 IR 1021; errata filed Jan 9, 1991, 2:30 p.m.: 14 IR 1070; errata filed Aug 6, 1991, 3:45 p.m.: 14 IR 2258; filed Apr 12, 1993, 11:00 a.m.: 16 IR 2157; filed Jul 23, 2001, 1:02 p.m.: 24 IR 3966)

SECTION 4. 327 IAC 8-2-8.2 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-8.2 Sanitary surveys

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-8-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-13-5-2; IC 13-18-2; IC 13-18-11; IC 13-18-16

Sec. 8.2. (a) The following conditions apply to the conducting of sanitary surveys:

(1) Beginning on:

(A) January 1, 2002, a Subpart H ~~PWS~~ **system** must undergo a sanitary survey every three (3) years; and

(B) December 1, 2009, a:

(i) CWS using ground water must undergo a sanitary survey every three (3) years; and

(ii) NCWS using ground water must undergo a sanitary survey every five (5) years.

(2) The commissioner may conduct a sanitary survey at a CWS using ground water every five (5) years if the ~~system:~~ **CWS:**

(A) either:

(i) provides 4-log treatment of viruses before or at the first customer for all ~~its~~ **the CWS's** ground water sources; or

(ii) has an outstanding performance record, as determined by the commissioner and documented in previous sanitary surveys; and

(B) has no history of:

(i) total coliform MCL violations; or

(ii) monitoring violations;

under sections 7, 8, and 8.1 of this rule.

(b) **Until March 31, 2016,** the commissioner shall review the results of each sanitary survey to determine:
(1) whether the existing monitoring frequency is adequate;
(2) what measures the ~~system~~ **PWS** needs to undertake to improve drinking water quality; and
(3) whether significant deficiencies exist.

Beginning April 1, 2016, the requirements under 40 CFR 141, Subpart Y*, apply to conducting and reviewing a sanitary survey.

(c) In conducting a sanitary survey of a PWS using ground water after the commissioner approves a wellhead protection program under 327 IAC 8-4.1, information on sources of contamination within the delineated wellhead protection area that was collected in the course of developing and implementing the program should be considered instead of collecting new information if the **existing** information was collected since the last time the ~~system~~ **PWS using ground water** was subject to a sanitary survey.

(d) Sanitary surveys must be performed by the commissioner or an agent approved by the commissioner. The PWS shall ensure that the:
(1) sanitary survey takes place; and
(2) commissioner or agent approved by the commissioner has access to the PWS and its records in order to verify compliance with this article and the federal Act (42 ~~U.S.C.A.~~ **U.S.C.** 300f through 42 ~~U.S.C.A.~~ **U.S.C.** 300j-26).

(e) The department shall evaluate each PWS during a sanitary survey in accordance with this section to determine if deficiencies exist. Deficiencies include the following:
(1) Deficiencies relating to drinking water sources, including the following:
(A) Raw water quality monitoring that is indicative of an immediate sanitary risk.
(B) Activities or pollution sources in the sanitary setback area or immediate source water area that will cause risks.
(C) Failure by the PWS to maintain ownership or control of the sanitary setback area, where the PWS is required to maintain a setback as:
(i) permitted under 327 IAC 8-3 for wells installed after April 30, 1999; or
(ii) specified in a permit issued by the commissioner prior to April 30, 1999.
(D) Uncovered or inadequately sealed reservoirs without treatment that meets the requirements of section 8.5 of this rule.
(E) Failure by the PWS to put measures in place to prevent unauthorized access to the intakes or wells.
(F) For a Subpart H ~~PWS,~~ **system,** spring boxes that are poorly constructed or subject to flooding.
(G) For a PWS using ground water, in whole or in part, the following ~~shall~~ **must** be evaluated for deficiencies:
(i) Location or condition of a well making it vulnerable to surface water runoff or flooding, including:
(AA) elevation of casing not protected from a one hundred (100) year flood; or
(BB) presence of a well not properly abandoned in accordance with 312 IAC 13-10 in the wellhead protection area for a CWS as defined by 327 IAC 8-4.1 or, for an NCWS, the sanitary setback area required to be maintained under 327 IAC 8-3 for wells installed after April 30, 1999, or as specified in a permit issued by the commissioner prior to that date.
(ii) Improperly constructed wells.
(iii) Condition of a well creating potential for source water contamination, including a:
(AA) cracked casing;
(BB) missing well cap; or
(CC) casing not properly sealed.
(iv) When required by the commissioner, a well must be evaluated as to whether it is under the influence of surface water.
(2) Deficiencies relating to drinking water treatment, including the following:
(A) For a Subpart H PWS and a ~~ground water~~ PWS **using ground water** with 4-log virus inactivation at or prior to the first customer, inadequate disinfection contact time.
(B) One (1) or more of the treatment processes is incapable of producing water that meets standards under all conditions of raw water quality.
(C) No provisions to warn operators of treatment failures.
(D) Failure by the PWS to have a disinfection profile as required under 327 IAC 8-2.6-2 or 327 IAC 8-2.6-2.1.

(E) Treatment processes required to meet log removal requirements under 327 IAC 8-2.3 or 327 IAC 8-2.6 are not maintained or operational.
(F) Treatment capacity for contaminants regulated under this article is not sufficient to meet peak daily demand.
(G) Unrestricted access by unauthorized personnel to any portion of the treatment components of a PWS.
(H) Treatment processes are uncovered or inadequately sealed where the treatment does not meet the requirements of sections 8.5 and 8.6 of this rule and 327 IAC 8-2.6.

(3) Deficiencies relating to drinking water distribution and transmission, including the following:
(A) For a Subpart H ~~PWS,~~ **system,** a raw water transmission main equipped with a bypass around the treatment.
(B) Improper operation of **a** bypass on a raw water transmission line that produces finished water that does not meet the requirements of this article.
(C) Pressures in the distribution system below twenty (20) pounds per square inch (psi) during all flow conditions except the following:
(i) Scheduled maintenance.
(ii) Corrected distribution system failures.
(iii) Fireflow.
(D) Greater than twenty-five percent (25%) water loss at a CWS based on a one (1) year average.
(E) Failure by the PWS to make treatment or operational changes to correct persistent or recurring bacteriological contamination not attributable to the source water. The commissioner may require treatment to remedy bacteriological contamination.
(F) For a PWS that serves water to the public, the following apply:
(i) The following ~~system~~ **PWS** types ~~shall~~ **must** meet the requirements under item (ii):
(AA) A ~~ground water~~ PWS ~~meeting~~ **using ground water that meets** 4-log inactivation of viruses at or before first customer using chlorine or chloramine.
(BB) A ~~ground water~~ PWS ~~feeding~~ **using ground water that feeds** chlorine or chloramines to meet the conditions of a permit or setback requirements.
(CC) Any ~~ground water~~ PWS ~~required~~ **using ground water that is required** by the commissioner to provide disinfection due to a history of persistent or recurring bacteriological contamination.
(DD) Any PWS adding a disinfectant to control bacterial regrowth in the distribution system.
(EE) Any Subpart H ~~PWS.~~ **system.**
(ii) The following requirements ~~shall~~ **must** be met by the ~~systems~~ **PWSs** under item (i):
(AA) The residual disinfectant concentration in the distribution system, measured as free chlorine, combined chlorine, or chlorine dioxide, is undetectable in more than five percent (5%) of the samples each month for two (2) consecutive months.
(BB) A PWS may request that the commissioner allow a lower detection level than specified in section 1(98) of this rule if the ~~system~~ **PWS** can show that the bacteriological quality of the water in the distribution system is not being compromised. The request must be made in writing, and the commissioner shall respond to the request in writing.
(CC) If necessary to maintain public health and required by the commissioner, a PWS may be required to meet higher minimum disinfectant residual levels than specified under subitem (AA).

(4) Deficiencies relating to finished water storage, including the following:
(A) Inadequate sealing of a **storage** tank to prevent entry of contaminants.
(B) Inadequate maintenance of a storage tank that results in:
(i) a violation of standards; or
(ii) the storage tank being structurally unsound.
(C) Venting of **a storage** tank that fails to prevent the entrance of:
(i) surface water;
(ii) rainwater;
(iii) birds;
(iv) animals;
(v) insects; or
(vi) dust.
(D) Construction and screening of an overflow pipe and drain that does not meet the following criteria:
(i) Located twelve (12) to twenty-four (24) inches above the ground surface.
(ii) Discharge over a drainage inlet structure or a splash plate.
(iii) Opens downward.
(iv) For ground level storage, overflow drain is screened with twenty-four (24) mesh noncorrodible screen.
(v) For elevated tanks, **the** overflow drain is screened with a four (4) mesh noncorrodible screen.
(vi) If **a** flapper valve is used, a screen must be provided inside the valve.
(vii) An overflow pipe of sufficient diameter to permit waste of water in excess of the filling rate.

(E) Uncovered finished water reservoir.
(F) Failure to maintain access restrictions where necessary to prevent contamination.

(5) Deficiencies relating to drinking water pumps, pump facilities, and controls, including the following:
(A) Storage of materials at the pumping station that:
(i) offer potential for contamination of the water; or
(ii) pose safety risks to operators.
(B) Pump and facilities **that** are not:
(i) designed appropriately; or
(ii) properly operated and maintained.

(6) Deficiencies relating to monitoring, reporting, and data verification, including the following:
(A) The use of improper procedures or methods when conducting required on-site laboratory analyses.
(B) Failure to use a certified laboratory.
(C) Falsification of data.
(D) Failure to collect required samples.
(E) A sampling plan required under any of the following rules is not available, not being followed, or not representative of the water distribution system:
(i) Total coliform rule (TCR), according to section 8(a) of this rule.
(ii) Stage 1 disinfectants and disinfection byproducts rule, according to 327 IAC 8-2.5-6(f).
(iii) Stage 2 disinfectants and disinfection byproducts rule, according to 327 IAC 8-2.5-13.
(iv) Ground water rule (GWR) triggered monitoring plan, according to 327 IAC 8-2.3-4(a)(2)(B).
(F) Failure to submit properly documented monthly reports of operation according to 327 IAC 8-11.

(7) Deficiencies relating to system management and operations, including the following:
(A) The PWS has inadequate personnel to meet the requirements of 327 IAC 8-12.
(B) Emergency response plan requirements are as follows:
(i) The following ~~systems shall~~ **PWSs must** develop an emergency response plan:
(AA) A CWS.
(BB) An NCWS that is required or plans to maintain operation in the event of an emergency.
(ii) An emergency response plan must include the following core elements:
(AA) System specific information.
(BB) Water system **personnel** roles and responsibilities.
(CC) Communication procedures.
(DD) Personnel safety.
(EE) Identification of alternate water sources.
(FF) Replacement equipment and chemical supplies.
(GG) Property protection.
(HH) Water sampling and monitoring.
(C) The PWS does not have an updated emergency response plan that includes annual certification of the following:
(i) Proof that the emergency response plan was:
(AA) reviewed in the past year; and
(BB) updated if necessary.
(ii) ~~That the~~ **Current** contact information included in the emergency response plan. ~~is current.~~
(D) Failure by the PWS to protect the water supply from contamination when any part of the ~~system~~ **PWS** is out of service for:
(i) repair;
(ii) construction;
(iii) alteration; or
(iv) replacement.
(E) Failure by the PWS to operate and maintain the ~~water system~~ **PWS** in a manner to ensure providing water that meets all requirements of the Act ~~(Title 42, U.S.C.A. 300F~~ **(42 U.S.C. 300f** through **42 U.S.C.** 300j-26) and IC 13-18-16-6. Measures to meet these requirements must include having and implementing a written or otherwise documented approach for the following:
(i) Maintaining a record of system components, including information necessary to:
(AA) operate;
(BB) maintain; and
(CC) repair;
system components.
(ii) Ensuring system components are operated and maintained to:
(AA) meet requirements of the Act; and
(BB) provide water that is suitable for ordinary domestic consumption.
(iii) Ensuring timely response and repair in the event of component failure.

(iv) Maintaining an inventory of critical spare parts.
(v) Performing compliance monitoring.
(vi) Maintaining records pertaining to these requirements.

The requirements of this clause apply to all CWSs and any NCWS that is required to meet 410 IAC 16.2-5-1.6(d). The commissioner may also require an NCWS with unaddressed deficiencies, including service outages, monitoring and reporting violations, or public notification violations to meet the requirements of this clause.

(F) Failure by the PWS to notify the department within twenty-four (24) hours of any service interruption lasting at least eight (8) hours. Notification must be made by one (1) of the following means:
(i) E-mail.
(ii) Facsimile.
(iii) Telephone.
(iv) Other means approved by the commissioner.

(8) Deficiencies relating to operator certification, including the ~~system~~ **PWS** being in noncompliance with 327 IAC 8-12.

(f) The following may be classified as significant deficiencies:
(1) Any of the:
(A) deficiencies included in subsection (e); or
(B) other conditions that are found during a sanitary survey or other site visit that may have a potential to cause an immediate risk to human health.
(2) Any deficiency:
(A) that is under the control of the PWS and was found during a previous sanitary survey but has not been corrected; or
(B) for which the PWS is not in compliance with a correction schedule approved by the commissioner.

(g) Subpart H systems shall respond in writing to any deficiency found during a sanitary survey and reported to the Subpart H ~~PWS~~ **system** by the commissioner. Response requirements are as follows:
(1) The response must:
(A) be made within forty-five (45) days of receipt of the report; and
(B) indicate:
(i) how the PWS will address deficiencies found during the sanitary survey; and
(ii) on what schedule the PWS will address deficiencies found during the sanitary survey.
(2) The report must indicate whether deficiencies found during the sanitary survey are under the control of the PWS.

(h) **PWSs using** ground water ~~systems~~ shall respond in writing to any deficiency found during a sanitary survey ~~and~~ **that is** reported to the ~~ground water~~ PWS **using ground water** by the commissioner. Response requirements are as follows:
(1) The response must:
(A) be made within thirty (30) days of receipt of the report; and
(B) indicate:
(i) how the PWS will address deficiencies found during the sanitary survey; and
(ii) on what schedule the PWS will address deficiencies found during the sanitary survey.
(2) The report must indicate whether deficiencies found during the sanitary survey are under the control of the PWS.

(i) If a CPE is required under 327 IAC 8-2.6-5, the PWS shall implement any follow-up recommendations that result as part of the program.

(j) The commissioner may require a shorter time frame than required by this section for response or addressing deficiencies if the commissioner determines the deficiency poses an immediate health risk.

***This document is incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Thirteenth Floor, Indianapolis, Indiana 46204.**

(Water Pollution Control Division; 327 IAC 8-2-8.2; filed Dec 28, 1990, 5:10 p.m.: 14 IR 1022; filed Apr 12, 1993,

11:00 a.m.: 16 IR 2158; filed Oct 24, 2006, 3:03 p.m.: 20061122-IR-327050255FRA; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA)

SECTION 5. 327 IAC 8-2-8.3 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-8.3 Collection of samples for fecal coliforms or Escherichia coli (E. coli) testing

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 8.3. (a) **The provisions of this section are applicable to a PWS until all required repeat monitoring under section 8.1 of this rule and fecal coliform or E. coli testing required under this section that was initiated by a total coliform positive sample taken before April 1, 2016, is completed as well as analytical method, reporting, record keeping, public notification, and consumer confidence report requirements associated with that monitoring and testing.**

(b) If any routine or repeat sample is total coliform-positive, the ~~public water supply system~~ **PWS** must **do the following:**

(1) Analyze ~~that~~ **the** total coliform-positive culture medium to determine if fecal coliforms are present, except that the ~~system~~ **PWS** may test for E. coli in lieu of fecal coliforms.

(2) If fecal coliforms or E. coli are present, the ~~public water supply system~~ **PWS** must notify the commissioner by the end of the same business day that the ~~system~~ **PWS** is notified of the test results.

(3) If the ~~system~~ **PWS** is notified of the result after the close of business, the ~~system~~ **PWS** shall notify the commissioner before the end of the next business day.

~~(b)~~ **(c)** The commissioner has the discretion to allow a ~~public water system,~~ **PWS,** on a case-by-case basis, to ~~forego~~ **forgo** fecal coliform or E. coli testing on a total coliform-positive sample if ~~that system~~ **the PWS** assumes that the total coliform-positive sample is fecal coliform-positive or E. coli-positive. Accordingly, the ~~system~~ **PWS** must notify the commissioner as specified in subsection (a), and the provisions of section 7(b) of this rule apply.

(Water Pollution Control Division; 327 IAC 8-2-8.3; filed Dec 28, 1990, 5:10 p.m.: 14 IR 1022; filed Apr 12, 1993, 11:00 a.m.: 16 IR 2158)

SECTION 6. 327 IAC 8-2-8.4 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-8.4 Analytical methods for microbiological contaminants

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 8.4. (a) **The provisions of this subsection are applicable to a PWS until all required repeat monitoring under section 8.1 of this rule and fecal coliform or E. coli testing required under section 8.3 of this rule that was initiated by a total coliform positive sample taken before April 1, 2016, is completed as well as analytical method, reporting, record keeping, public notification, and consumer confidence report requirements associated with that monitoring and testing.** A ~~public water system~~ **PWS** shall analyze for microbiological contaminants as follows:

(1) The standard sample volume required for total coliform analysis, regardless of analytical method used, is one hundred (100) milliliters.

(2) ~~Public water systems need~~ **A PWS needs** only **to** determine the presence or absence of total coliforms, and a determination of total coliform density is not required.

(3) ~~Public water systems~~ **A PWS** must conduct total coliform analyses in accordance with one (1) of the following analytical methods or with the alternative methods listed in Appendix A to Subpart C of 40 CFR 141:

(A) Total coliform fermentation technique[1, 2, 3] as set forth in Method 9221A* and Method 9221B*.

(B) Total coliform membrane filter technique[4] as set forth in Method 9222A*, Method 9222B*, and Method 9222C*.

(C) Presence-absence (P-A) coliform test[3, 5] as set forth in Method 9221D*.

(D) ONPG-MUG test[6] as set forth in Method 9223*.

(E) Colisure test*[7].

(F) E*Colite® test*.

(G) m-ColiBlue24® test*.

(4) ~~Public water systems~~ **A PWS** must conduct fecal coliform analysis in accordance with the procedure in this subdivision. When the MTF technique or presence-absence (P-A) coliform test is used to test for total coliforms, shake the lactose-positive presumptive tube or P-A bottle vigorously and transfer the growth with a sterile three (3) millimeter loop or sterile applicator stick into brilliant green lactose bile broth and EC medium to determine the presence of total and fecal coliforms, respectively. For **U.S.** EPA-approved analytical methods which use a membrane filter, transfer the total coliform-positive culture by one (1) of the following methods:

(A) Remove the membrane containing the total coliform colonies from the substrate with a sterile forceps and carefully curl and insert the membrane into a tube of EC medium. (The laboratory may first remove a small portion of selected colonies for verification.)

(B) Alternately, the laboratory may swab the entire membrane filter surface with a sterile cotton swab and transfer the inoculum to EC medium (do not leave the cotton swab in the EC medium), or inoculate individual total coliform-positive colonies into EC medium.

Gently shake the inoculated EC tubes to ensure adequate mixing and incubate in a water bath at forty-four and one-half (44.5) degrees Celsius, plus or minus two-tenths (0.2) degrees Celsius, for twenty-four (24) hours, plus or minus two (2) hours. Gas production of any amount in the inner fermentation tube of the EC medium indicates a positive fecal coliform test. The preparation of EC medium is described in Method 9221E, paragraph 1(a)*. ~~Public water systems need~~ **A PWS needs** only **to** determine the presence or absence of fecal coliforms; a determination of fecal coliform density is not required.

(5) ~~Public water systems~~ **A PWS** must conduct analysis of Escherichia coli in accordance with one (1) of the following analytical methods or with the alternative methods listed in Appendix A to Subpart C of 40 CFR 141:

(A) EC medium supplemented with fifty (50) micrograms per milliliter of 4-methylumbelliferyl-beta-D-glucuronide (MUG) (final concentration). EC medium is described in Method 9221E, paragraph 1(a)*. MUG may be added to EC medium before autoclaving. EC medium supplemented with fifty (50) micrograms per milliliter of MUG is commercially available. At least ten (10) milliliters of EC medium supplemented with MUG must be used. The inner inverted fermentation tube may be omitted. The procedure for transferring a total coliform-positive culture to EC medium supplemented with MUG ~~shall be as~~ **is** specified in subdivision (4) for transferring a total coliform-positive culture to EC medium. Observe fluorescence with an ultraviolet light three hundred sixty-six (366) nanometers (preferably with a six (6) watt lamp) in the dark after incubating tube at forty-four and one-half (44.5) degrees Celsius, plus or minus two-tenths (0.2) degrees Celsius for twenty-four (24) hours, plus or minus two (2) hours.

(B) Nutrient agar supplemented with one hundred (100) micrograms per milliliter of MUG (final concentration). Nutrient agar is described in Method 9221E*. This test is used to determine if a total coliform-positive sample, as determined by the membrane filter technique or any other method in which a membrane filter is used contains E. coli. Transfer the membrane filter containing a total coliform colony or colonies to nutrient agar supplemented with one hundred (100) micrograms per milliliter (final concentration) of MUG. After incubating the agar plate at thirty-five (35) degrees Celsius for four (4) hours, observe the colony or colonies under ultraviolet light three hundred sixty-six (366) nanometers (preferably with a six (6) watt lamp) in the dark for fluorescence. If fluorescence is visible, E. coli are present.

(C) Minimal medium ONPG-MUG (MMO-MUG) test as described in the article "National Field Evaluation of a Defined Substrate Methods for the Simultaneous Detection of Total Coliforms and Escherichia coli from Drinking Water: Comparison with Presence-Absence Techniques*". If the MMO-MUG test is total coliform-positive after a twenty-four (24) hour incubation, test the medium for fluorescence with a three hundred sixty-six (366) nanometer ultraviolet light (preferably with a six (6) watt lamp) in the dark. If fluorescence is observed, the sample is E. coli-positive. If fluorescence is questionable (cannot be definitively read) after twenty-four (24) hours incubation, incubate the culture for an additional four (4) hours, but not to exceed twenty-eight (28) hours total, and again test the medium for fluorescence. The MMO-MUG test with hepes buffer in lieu of phosphate buffer is the only approved formulation for the detection of E. coli.

(D) The Colisure test*.

(E) The Membrane Filter Method with MI agar*.

(F) E*Colite® test*.

(G) m-ColiBlue24® test*.

(6) As an option to subdivision (5)(C), a ~~system~~ **PWS** with a total coliform-positive, MUG-negative, MMO-MUG test may further analyze the culture for the presence of E. coli by transferring a one-tenth (0.1) milliliter, twenty-eight (28) hour MMO-MUG culture to EC medium plus MUG with a pipet. The formulation and incubation conditions of EC medium plus MUG and observation of the results are described in subdivision (5)(A).

(b) **The provisions of this subsection are applicable to a PWS until all required repeat monitoring**

under section 8.1 of this rule and fecal coliform or E. coli testing required under section 8.3 of this rule that was initiated by a total coliform positive sample taken before April 1, 2016, is completed as well as analytical method, reporting, record keeping, public notification, and consumer confidence report requirements associated with that monitoring and testing. Response to a violation ~~shall be~~ **is** as follows:

(1) A ~~public water system which~~ **PWS that** has exceeded the MCL for total coliforms in section 7 of this rule must:

(A) report the violation to the commissioner ~~no~~ **not** later than the end of the next business day after ~~it~~ **the PWS** learns of the violation; and

(B) notify the public in accordance with 327 IAC 8-2.1-7 through 327 IAC 8-2.1-16.

(2) A ~~public water system which~~ **PWS that** has failed to comply with a coliform monitoring requirement, including the sanitary survey requirement, must:

(A) report the monitoring violation to the commissioner within ten (10) days after the ~~system~~ **PWS** discovers the violation; and

(B) notify the public in accordance with 327 IAC 8-2.1-7 through 327 IAC 8-2.1-16.

(c) The time from sample collection to initiation of analysis cannot exceed thirty (30) hours. ~~Systems are~~ **A PWS is** encouraged but not required to hold samples below ten (10) degrees Celsius during transit.

(d) The ~~agency~~ **commissioner** strongly recommends that laboratories **do the following:**

(1) Evaluate the false-positive and negative rates for the method or methods they use for monitoring total coliforms. ~~The agency also encourages laboratories to~~

(2) Establish false-positive and negative rates within their own laboratory and sample matrix (drinking water or source water or both) with the intent that if the method they choose has an unacceptable false-positive or negative rate, another method can be used. ~~The agency suggests that laboratories~~

(3) Perform ~~these~~ **the** studies **under subdivisions (1) and (2)** on a minimum of five percent (5%) of all total coliform-positive samples, except for those methods where verification or confirmation or both is already required, for example, the M-Endo and LES Endo Membrane Filter Tests, Standard Total Coliform Fermentation Technique, and Presence-Absence Coliform Test.

Methods for establishing false-positive and negative-rates may be based on lactose fermentation, the rapid test for ß-galactosidase and cytochrome oxidase, multi-test identification systems, or equivalent confirmation tests. False-positive and false-negative information is often available in published studies or from the manufacturer, or both.

[1]Lactose broth, as commercially available, may be used in lieu of lauryl tryptose broth, if the ~~system~~ **PWS** conducts at least twenty-five (25) parallel tests between this medium and lauryl tryptose broth using the water normally tested, and this comparison demonstrates that the false-positive rate and false-negative rate for total coliform, using lactose broth, is less than ten percent (10%).

[2]If inverted tubes are used to detect gas production, the media should cover these tubes at least one-half (1/2) to two-thirds (2/3) after the sample is added.

[3]No requirement exists to run the completed phase on ten percent (10%) of all total coliform-positive confirmed tubes.

[4]MI agar may also be used*.

[5]Six-times formulation strength may be used if the medium is filter-sterilized rather than autoclaved.

[6]The OPNG-MUG test is also known as the Autoanalysis Colilert System.

[7]The Colisure Test may be read after an incubation time of twenty-four (24) hours.

*The methods referenced in this section may be obtained as follows:

(1) Methods 9221A, 9221B, 9222A, 9222B, 9222C, 9221D, 9223, and 9221E may be found in "Standard Methods for the Examination of Water and Wastewater", 1992, American Public Health Association, et al., 18th edition, or "Standard Methods for the Examination of Water and Wastewater", 1995, American Public Health Association, et al., 19th edition, available from the American Public Health Association, et al., 1015 Fifteenth Street N.W., Washington, D.C. 20005.

(2) A description of the Colisure test may be obtained from IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092.

(3) The minimal medium ONPG-MUG test may be found in "National Field Evaluation of a Defined Substrate Method for the Simultaneous Detection of Total Coliforms and Escherichia coli from Drinking Water: Comparison with Presence-Absence Techniques", (Edberg, et al.), Applied and Environmental Microbiology, Volume 55, pages 1003–1008, April 1989.

(4) Preparation and use of MI agar is set forth in the article, "New Medium for the Simultaneous Detection of Total Coliforms and Escherichia coli in Water" by Brenner, K.P., et al., 1993, Applied and Environmental Microbiology, 59:3534-3544, and errata published in Applied and Environmental Microbiology, 59:4378. Also

available from the Office of Water Resource Center (RC-4100), 401 M. Street S.W., Washington, D.C. 20460, EPA/600/J-99/225.

(5) A description of the E*Colite® test, "Presence/Absence for Coliforms and E. coli in Water", December 24, 1997, is available from Charm Sciences, Inc., 36 Franklin Street, Malden, Massachusetts 02148-4120.

(6) A description of the m-ColiBlue24® test, August 17, 1999, is available from the Hach Company, 100 Dayton Avenue, Ames, Iowa 50010.

These methods are available for ~~copying~~ **review** at the Indiana Department of Environmental Management, Office of ~~Water Quality,~~ **Legal Counsel,** 100 North Senate Avenue, ~~Room N1255,~~ **Thirteenth Floor,** Indianapolis, Indiana 46204.

(Water Pollution Control Division; 327 IAC 8-2-8.4; filed Dec 28, 1990, 5:10 p.m.: 14 IR 1023; errata filed Jan 9, 1991, 2:30 p.m.: 14 IR 1070; filed Apr 12, 1993, 11:00 a.m.: 16 IR 2158; filed Aug 25, 1997, 8:00 a.m.: 21 IR 51; errata filed Dec 10, 1997, 3:45 p.m.: 21 IR 1348; filed Jul 23, 2001, 1:02 p.m.: 24 IR 3968; errata filed Jul 25, 2001, 3:25 p.m.: 24 IR 3991; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1092; errata filed Feb 22, 2002, 2:01 p.m.: 25 IR 2254; errata filed Feb 6, 2006, 11:15 a.m.: 29 IR 1937; filed Feb 25, 2013, 8:36 a.m.: 20130327-IR-327110667FRA)

SECTION 7. 327 IAC 8-2-8.8 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-8.8 Monitoring requirements; PWSs that provide filtration treatment

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 8.8. (a) A ~~public water system~~ **PWS** that:

(1) uses:

(A) a surface water source; or

(B) a ground water source under the influence of surface water; and

(2) provides filtration treatment;

must monitor in accordance with this section beginning June 29, 1993, or when filtration is installed, whichever is later.

(b) Turbidity measurements as required by section 8.5 of this rule must be performed on representative samples of the ~~system's~~ **PWS's** filtered water every four (4) hours (or more frequently) that the ~~system~~ **PWS** serves water to the public. A ~~public water system~~ **PWS** may substitute continuous turbidity monitoring for grab sample monitoring if ~~it~~ **the PWS** validates the continuous measurement for accuracy on a regular basis and obtains approval from the commissioner. ~~For~~ **The commissioner may reduce the turbidity sampling frequency to once per day if the commissioner determines that less frequent monitoring is sufficient to indicate effective filtration performance for the following:**

(1) Any ~~systems~~ **PWS** using:

(A) slow sand filtration;

(B) filtration treatment other than conventional treatment;

(C) direct filtration; or

(D) diatomaceous earth filtration. ~~the commissioner may reduce the sampling frequency to once per day if he or she determines that less frequent monitoring is sufficient to indicate effective filtration performance.~~

(2) ~~For systems~~ **A PWS** serving five hundred (500) or fewer persons, ~~the commissioner may reduce the turbidity sampling frequency to once per day,~~ regardless of the type of filtration treatment used. ~~if the commissioner determines that less frequent monitoring is sufficient to indicate effective filtration performance.~~

(c) The residual disinfectant concentration of the water entering the distribution system must **meet the following:**

(1) Requirements including the following:

(A) Be monitored continuously. ~~and~~

(B) The lowest **residual disinfectant concentration** value must be recorded each day. ~~except that~~

(2) Exceptions, if applicable, to subdivision (1) as follows:

(A) If there is a failure in the continuous monitoring equipment, **the PWS must conduct sampling as follows:**

(i) Grab sampling every four (4) hours may be conducted in lieu of continuous monitoring. ~~but~~

(ii) Sampling under item (i) may occur for ~~no~~ **not** more than two (2) working days following the failure of the equipment. ~~and systems~~

(B) A PWS serving three thousand three hundred (3,300) or fewer persons may take grab samples in lieu of providing continuous monitoring on an ongoing basis at the frequencies each day prescribed as follows:

~~System~~ **PWS** size by population	Samples per day*
<500	1
501–1,000	2
1,001–2,500	3
2,501–3,300	4

*The day's samples cannot be taken at the same time. The sampling intervals are subject to review and approval by the commissioner.

(3) If at any time the residual disinfectant concentration falls below two-tenths (0.2) milligram per liter in a ~~system~~ **PWS** using grab sampling **under subdivision (2)** in lieu of continuous monitoring **under subdivision (1),** the ~~system~~ **PWS** must take a grab sample every four (4) hours until the residual disinfectant concentration is equal to or greater than two-tenths (0.2) milligram per liter.

(d) The residual disinfectant concentration must be measured **according to the following:**

(1) At least at the same points in the distribution system and at the same time as total coliforms are sampled **in accord with the following:**

(A) Until March 31, 2016, as specified in section 8 of this rule. ~~except that the commissioner may allow~~

(B) Beginning April 1, 2016, as specified in 40 CFR 141.854 through 40 CFR 141.858*.

(2) At points other than the total coliform sampling points under subdivision (1) for a ~~public water system which~~ **PWS that** uses both a:

(A) surface water source or a ground water source under direct influence of surface water; and ~~a~~

(B) ground water source; ~~to take disinfectant residual samples at points other than the total coliform sampling points~~

if the commissioner determines that ~~such~~ **the sampling** points **other than those under subdivision (1)** are more representative of treated (disinfected) water quality within the distribution system.

Heterotrophic bacteria, measured as heterotrophic plate count (HPC), as specified in section 8.7(3) of this rule, may be measured in lieu of residual disinfectant concentration.

(e) If the commissioner determines, based on site-specific considerations, that a ~~system:~~ **PWS:**

(1) has no means for having a sample transported and analyzed for HPC by a certified laboratory under the requisite time and temperature conditions specified in section 8.7(3) of this rule; and ~~that the system~~

(2) is providing adequate disinfection in the distribution system;

the requirements of subsection (d) do not apply to that ~~system.~~ **PWS.**

***These documents are incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Thirteenth Floor, Indianapolis, Indiana 46204.**

(Water Pollution Control Division; 327 IAC 8-2-8.8; filed Dec 28, 1990, 5:10 p.m.: 14 IR 1026; filed Apr 12, 1993, 11:00 a.m.: 16 IR 2162)

SECTION 8. 327 IAC 8-2-13 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-13 Reporting requirements; test results and failure to comply

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-14-13; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 13. (a) **The supplier of water or the certified laboratory performing the analysis shall meet the reporting requirements in:**

(1) this section;
(2) 327 IAC 8-2.3;
(3) 327 IAC 8-2.4;
(4) 327 IAC 8-2.5; and
(5) 327 IAC 8-2.6.

(b) Except where a shorter period is specified in ~~this rule, the supplier of water using forms provided by the commissioner shall report to the commissioner~~ **a rule listed under subsection (a),** the results of any test measurement or analysis ~~required by this rule~~ **must be reported to the commissioner** within the shorter of the following periods of time:

(1) The first ten (10) days following the month in which the result is received.

(2) The first ten (10) days following the end of the required monitoring period as stipulated by the commissioner.

~~(b)~~ **(c)** Except where a different reporting period is specified in this rule, ~~the supplier of water using forms provided by the commissioner shall report to the commissioner within twenty-four (24) hours of completion of laboratory analysis~~ all drinking water results ~~that indicate~~ **must be reported to the commissioner within twenty-four (24) hours of completion of laboratory analysis if there is an indication of one (1) or more of the following:**

(1) Positive total coliform results.

(2) Nitrate results that exceed five (5) milligrams per liter (mg/l). ~~and~~

(3) The failure to comply with any MCL.

The report must be made by telephone or one (1) of the methods specified in subsection ~~(e)~~ **(f)(2).** If notification is made by telephone, the results must also be reported to the commissioner using one (1) of the methods specified in subsection ~~(e)~~ **(f)** within forty-eight (48) hours of the telephone notification. If the supplier of water cannot provide the results under this subsection, the supplier of water shall make arrangements with the certified laboratory performing the analysis to submit the results directly to the commissioner using the methods specified in subsection ~~(e).~~ **(f).**

~~(c)~~ **(d)** The supplier of water is not required to report analytical results to the commissioner when the Indiana state **department of health drinking water** laboratory performs the analysis and reports the results to the commissioner.

~~(d)~~ **(e)** The supplier of water, within ten (10) days of completing the public notification required by 327 IAC 8-2.1-7 through 327 IAC 8-2.1-17, for the initial public notice and any repeat notices, shall submit to the commissioner a certification that it has fully complied with the public notification regulations. The ~~public water system~~ **PWS** must include with this certification a representative copy of each type of notice:

(1) distributed;

(2) published;

(3) posted; or

(4) made available to the:

(A) persons served by the ~~system;~~ **PWS;** or ~~to the~~

(B) media.

~~(e)~~ **(f)** The ~~submittal of the~~ information required under this section ~~shall~~ **must meet the following:**

(1) Be **on forms:**

(A) provided by the commissioner; and

(B) in a format specified by the commissioner.

(2) Be submitted in one (1) of the following manners:

~~(1)~~ **(A)** Mail.

~~(2)~~ **(B)** Facsimile.

~~(3)~~ **(C)** Electronic mail.

(D) Direct electronic submittal.

~~(4)~~ **(E)** Hand delivery.

~~(5)~~ **(F)** Other means determined by the commissioner to provide the degree of:

~~(A)~~ **(i)** confidentiality;

~~(B)~~ **(ii)** reliability;

(C) **(iii)** convenience; and

~~(D)~~ **(iv)** security;

appropriate to the information to be submitted.

(Water Pollution Control Division; 327 IAC 8-2-13; filed Dec 28, 1990, 5:10 p.m.: 14 IR 1030; filed Jul 23, 2001, 1:02 p.m.: 24 IR 3974; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1096; errata filed Feb 22, 2002, 2:01 p.m.: 25 IR 2254; filed May 1, 2003, 12:00 p.m.: 26 IR 2817; filed Jun 13, 2005, 2:30 p.m.: 28 IR 3217)

SECTION 9. 327 IAC 8-2-31 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2-31 Maximum contaminant level goals; microbiological contaminants

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-13-5-2; IC 13-18-2; IC 13-18-16

Sec. 31. ~~Maximum contaminant level goals (MCLGs)~~ **(a) MCLGs** are zero (0) for the following microbiological contaminants:

(1) Giardia lamblia.
(2) Viruses.
(3) Legionella.
(4) Total coliforms (including fecal coliforms and Escherichia coli).
(5) Cryptosporidium.
(6) Escherichia coli (E. coli).

(b) The MCLG identified in:
(1) subsection (a)(4) is applicable until March 31, 2016; and
(2) subsection (a)(6) is applicable beginning April 1, 2016.

(Water Pollution Control Division; 327 IAC 8-2-31; filed Dec 28, 1990, 5:10 p.m.: 14 IR 1047; filed May 1, 2003, 12:00 p.m.: 26 IR 2818)

SECTION 10. 327 IAC 8-2.1-3 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.1-3 Content of the reports

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 3. (a) A CWS shall provide to its customers an annual report that contains the information specified in this section and section 4 of this rule.

(b) The report **required under subsection (a)** must contain information on the source of the water delivered, including the following:

(1) The source or sources of water delivered by the CWS by including information on the following:
(A) The type of water, such as surface water or ground water.
(B) The commonly used name, if any.
(C) The location of the body or bodies of water.
(2) If, as follows:
(A) A source water assessment has been completed, the report must notify the consumers of the:
(i) availability of this information; and
(ii) means to obtain it.
In addition, ~~systems are~~ **a CWS is** encouraged to highlight in the report significant sources of contamination in the source water area if they have readily available information.
(B) A ~~system~~ **CWS** has received a source water assessment from the commissioner, the report must include a brief summary of the ~~system's~~ **CWS's** susceptibility to potential sources of contamination, using language:
(i) provided; or
(ii) written by the operator and approved;
by the commissioner.

(c) The report **required under subsection (a)** must include the following definitions:

(1) "Maximum contaminant level" or "MCL" means the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
(2) "Maximum contaminant level goal" or "MCLG" means the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
(3) For a report that contains information regarding a level 1 or level 2 assessment required under 40 CFR 141, Subpart Y*, the report must include the following applicable definitions:
(A) "Level 1 assessment" means a study of the water system to identify potential problems and

determine, if possible, why total coliform bacteria have been found in our water system.
(B) "Level 2 assessment" means a very detailed study of the water system to identify potential problems and determine, if possible, why either or both of the following has occurred:
(i) An E. coli MCL violation.
(ii) Total coliform bacteria have been found in our water system on multiple occasions.

(d) ~~A~~ **The** report **required under subsection (a)** that contains data on contaminants that the department or **U.S.** EPA regulates and uses any of the following terms must include definitions, as applicable, of the terms used:
(1) "Action level" means the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system ~~shall~~ **must** follow.
(2) "Maximum residual disinfectant level" or "MRDL" means the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
(3) "Maximum residual disinfectant level goal" or "MRDLG" means the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG does not reflect the benefits of the use of disinfectants to control microbial contaminants.
(4) "Treatment technique" means a required process intended to reduce the level of a contaminant in drinking water.

(e) ~~A~~ **The** report **required under subsection (a)** must include the information specified in this subsection for the following contaminants subject to mandatory monitoring, other than Cryptosporidium:
(1) Contaminants subject to an MCL, action level, or treatment technique, hereafter referred to as regulated contaminants.
(2) Disinfection byproducts or microbial contaminants for which monitoring is required by 40 CFR 141.142* and 40 CFR 141.143*, except as provided in subsection (f)(1) and that are detected in the finished water.
(3) Contaminants for which monitoring is required by 40 CFR 141.40* (unregulated contaminants).
(4) The data relating to these contaminants must be displayed in one (1) table or in several adjacent tables. Any additional monitoring results that a CWS chooses to include in its report must be displayed separately.
(5) The data must be derived from data collected to comply with **U.S.** EPA and department monitoring and analytical requirements during calendar year 1998 for the first report and subsequent calendar years thereafter, except the following:
(A) Where a ~~system~~ **CWS** is allowed to monitor for regulated contaminants less often than once a year, the:
(i) table or tables must include the date and results of the most recent sampling; and
(ii) report must include a brief statement indicating that the data presented in the report are from the most recent testing done in accordance with 327 IAC 8-2, 327 IAC 8-2.3, 327 IAC 8-2.5, 327 IAC 8-2.6, and 40 CFR 141.
No data older than five (5) years need be included.
(B) Results of monitoring in compliance with 40 CFR 141.142* and 40 CFR 141.143* need only be included:
(i) for five (5) years from the date of the last sample; or
(ii) until any of the detected contaminants becomes regulated and subject to routine monitoring requirements;
whichever comes first.
(6) For detected regulated contaminants listed in section 6(a) of this rule, the table or tables must contain the following information:
(A) The MCL for that contaminant expressed as a number equal to or greater than one and zero-tenths (1.0), as listed in section 6(a) of this rule.
(B) The MCLG for that contaminant expressed in the same units as the MCL.
(C) If there is no MCL for a detected contaminant, the:
(i) table must indicate that there is a treatment technique, or specify the action level, applicable to that contaminant; and
(ii) report ~~shall~~ **must** include the definitions for treatment technique or action level, or both, as appropriate, specified in subsection (d).
(D) For contaminants subject to an MCL, except turbidity, ~~and~~ total ~~coliforms,~~ **colifom, fecal coliform, and E. coli,** the highest contaminant level used to determine compliance with this rule and the range of detected levels as follows:
(i) When compliance with the MCL is determined annually or less frequently, the highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL.
(ii) When compliance with the MCL is determined by calculating a running annual average of all samples taken at a monitoring location, ~~systems~~ **a CWS** shall report the following:
(AA) The highest average of any of the monitoring locations and the range of all monitoring locations

expressed in the same units as the MCL.

(BB) For the MCLs for TTHM and HAA5 in 327 IAC 8-2.5-2(b), ~~systems~~ **a CWS** shall include the highest LRAA for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than one (1) location exceeds the TTHM or HAA5 MCL, the ~~system~~ **CWS** shall include the LRAAs for all locations that exceed the MCL.

(iii) When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all samples at all monitoring locations, ~~systems~~ **a CWS** shall report the following:

(AA) The average and range of detection expressed in the same units as the MCL.

(BB) Individual sample results for the initial distribution system evaluation (IDSE) conducted under 327 IAC 8-2.5-10 when determining the range of TTHM and HAA5 results to be reported in the annual consumer confidence report for the calendar year that the IDSE samples were taken.

(E) When turbidity is reported under 327 IAC 8-2-8.5 or 327 IAC 8-2.6-3, the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in 327 IAC 8-2-8.5 or 327 IAC 8-2.6-3 for the filtration technology being used. The report must include an explanation of the reasons for measuring turbidity.

(F) For lead and copper, the:

(i) ninetieth percentile value of the most recent round of sampling; and

(ii) number of sampling sites exceeding the action level.

(G) For total coliform **analytical results until March 31, 2016,** the highest monthly:

(i) number of positive samples for ~~systems~~ **a CWS** collecting fewer than forty (40) samples per month; or

(ii) percentage of positive samples for ~~systems~~ **a CWS** collecting at least forty (40) samples per month.

(H) For fecal coliform **and E. coli until March 31, 2016,** the total number of positive samples.

(I) For E. coli analytical results under 40 CFR 141, Subpart Y*, the total number of positive samples.

~~(I)~~ **(J)** The likely source or sources of detected contaminants to the best of the operator's knowledge. Specific information regarding contaminants:

(i) may be available in sanitary surveys and source water assessments; and

(ii) must be used when available to the operator.

If the operator lacks specific information on the likely source, the report must include one (1) or more of the typical sources for that contaminant listed in section 6(b) of this rule that are most applicable to the ~~system.~~ **CWS.**

(7) If a CWS distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources:

(A) the table must contain a separate column for each service area, and the report must identify each separate distribution system; or

(B) the ~~system~~ **CWS** may produce separate reports tailored to include data for each service area.

(8) The table must clearly identify any data indicating violations of MCLs or treatment techniques, and the report must contain a clear and readily understandable explanation of the violation, including the following:

(A) The length of the violation.

(B) The potential adverse health effects.

(C) Actions taken by the ~~system~~ **CWS** to address the violation.

To describe the potential health effects, the ~~system~~ **CWS** shall use the relevant language of section 6(c) of this rule.

(9) For detected unregulated contaminants for which monitoring is required (except Cryptosporidium), the table must contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants.

(f) Each report **required under subsection (a)** must contain the following information on Cryptosporidium, radon, and other contaminants:

(1) If the ~~system~~ **CWS** has performed any monitoring for Cryptosporidium, including monitoring performed to satisfy the requirements of 40 CFR 141.143*, that indicates Cryptosporidium may be present in the source water or the finished water, the report must include the following:

(A) A summary of the results of the monitoring.

(B) An explanation of the significance of the results.

(2) If the ~~system~~ **CWS** has performed any monitoring for radon that indicates radon may be present in the finished water, the report must include the following:

(A) The results of the monitoring.

(B) An explanation of the significance of the results.

(3) If the ~~system~~ **CWS** has performed additional monitoring that indicates the presence of other contaminants in the finished water, the commissioner strongly encourages ~~systems~~ **the CWS** to report any results that may indicate a health concern. To determine if results may indicate a health concern, the commissioner

recommends that ~~systems find~~ **the CWS finds** out if **U.S.** EPA has proposed a national primary drinking water regulation (NPDWR) or issued a health advisory for that contaminant by calling the Safe Drinking Water Hotline at (800) 426-4791. The commissioner and **U.S.** EPA consider levels detected above a proposed federal or state MCL or health advisory level to indicate possible health concerns. For ~~such~~ contaminants **found through additional monitoring,** the commissioner recommends that the report includes the following:

(A) The results of the monitoring.

(B) An explanation of the significance of the results noting the existence of a health advisory or a proposed regulation.

(g) In addition to the requirements of subsection (e)(6), the report **required under subsection (a)** must note any violation of a requirement listed in this subsection that occurred during the year covered by the report and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the ~~system~~ **CWS** has taken to correct the violation. Violations of the following requirements must be included:

(1) Monitoring and reporting of compliance data.

(2) Filtration and disinfection prescribed by 327 IAC 8-2-8.5 and 327 IAC 8-2-8.6. For ~~systems~~ **a CWS** that ~~have:~~ **has:**

(A) failed to install adequate filtration or disinfection equipment or processes; or

(B) had a failure of ~~such~~ **filtration or disinfection** equipment or processes that constitutes a violation;

the report must include the following language as part of the explanation of potential health effects, "inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.".

(3) Lead and copper control requirements prescribed by 327 IAC 8-2-36 through 327 IAC 8-2-47. For ~~systems~~ **a CWS** that ~~fail~~ **fails** to take one (1) or more actions prescribed by 327 IAC 8-2-36(d) or 327 IAC 8-2-40 through 327 IAC 8-2-43, the report must include the applicable language from section 6(c) of this rule for lead or copper, or both.

(4) Treatment techniques for acrylamide and epichlorohydrin prescribed by 327 IAC 8-2-35. For ~~systems~~ **a CWS** that ~~violate~~ **violates** 327 IAC 8-2-35, the report must include the relevant language from section 6(c) of this rule.

(5) Record keeping of compliance data.

(6) Special monitoring requirements prescribed by 327 IAC 8-2-21.

(7) Violation of the terms of an administrative or judicial order.

(h) The ~~following additional information must be contained in the~~ report **required under subsection (a) must contain the following additional information:**

(1) A brief explanation regarding contaminants that may reasonably be expected to be found in drinking water, including bottled water. This explanation may include the language in clauses (A) through (C), or ~~systems~~ **a CWS** may use ~~their~~ **its** own comparable language. The report **required under subsection (a)** must also include the language of clause (D). The language is as follows:

(A) The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it:

(i) dissolves naturally-occurring minerals and, in some cases, radioactive material; and

(ii) can pick up substances resulting from the presence of animals or from human activity.

(B) Contaminants that may be present in source water include the following:

(i) Microbial contaminants, such as viruses and bacteria, that may come from the following:

(AA) Sewage treatment plants.

(BB) Septic systems.

(CC) Agricultural livestock operations.

(DD) Wildlife.

(ii) Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from any of the following:

(AA) Urban stormwater runoff.

(BB) Industrial or domestic wastewater discharges.

(CC) Oil and gas production.

(DD) Mining.

(EE) Farming.

(iii) Pesticides and herbicides that may come from a variety of sources, such as the following:

(AA) Agriculture.

(BB) Urban storm water runoff.

(CC) Residential uses.

(iv) Organic chemical contaminants, including synthetic and volatile organic chemicals, that:

(AA) are byproducts of industrial processes and petroleum production; and

(BB) can also come from gas stations, urban storm water run-off, and septic systems.

(v) Radioactive contaminants that can be:

(AA) naturally-occurring; or

(BB) the result of oil and gas production and mining activities.

(C) In order to ensure that tap water is safe to drink, the department and **U.S.** EPA prescribe regulations that limit the amount of certain contaminants in water provided by PWS. Federal Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

(D) Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

(2) The telephone number of the owner, operator, or designee of the CWS as a source of additional information concerning the report.

(3) In communities with a large proportion of non-English speaking residents, in which twenty percent (20%) or more of the residents speak the same language other than English, the report must contain:

(A) information in the appropriate language or languages regarding the importance of the report; or

(B) a telephone number or address where the residents may contact the ~~system~~ **CWS** to obtain:

(i) a translated copy of the report; or

(ii) assistance in the appropriate language.

(4) The report **required under subsection (a)** must include information about opportunities for public participation in decisions that may affect the quality of water. This information may include, but is not limited to, the time and place of regularly scheduled board meetings.

(5) The ~~systems~~ **CWS** may include any additional information as ~~they deem~~ **the CWS deems** necessary for public education consistent with, and not detracting from, the purpose of the report.

(6) ~~Systems~~ **A CWS** required to comply with 327 IAC 8-2.3 shall provide the following notices, where applicable:

(A) A **CWS using** ground water ~~system~~ that receives notice from the commissioner of a significant deficiency or notice from a laboratory of a fecal indicator-positive ground water source sample that is not invalidated by the commissioner under 327 IAC 8-2.3-4(d) shall inform its customers of any significant deficiency that is uncorrected at the time of the next report or of any fecal indicator-positive ground water source sample in the next report. The ~~system~~ **CWS using ground water** shall continue to inform the public annually until the commissioner determines that particular significant deficiency is corrected or the fecal contamination in the ground water source is addressed under 327 IAC 8-2.3-5(a). Each report must include the following elements:

(i) The nature of the particular significant deficiency or the source of the fecal contamination, if known, and the date the significant deficiency was identified by the commissioner or the dates of the fecal indicator-positive ground water source samples.

(ii) Whether the fecal contamination in the ground water source has been addressed under 327 IAC 8-2.3-5(a) and the date of the action.

(iii) For each significant deficiency or fecal contamination in the ground water source that has not been addressed under 327 IAC 8-2.3-5(a), the commissioner-approved plan and schedule for correction, including the following:

(AA) Interim measures.

(BB) Progress to date.

(CC) Any interim measures completed.

(iv) If the ~~system~~ **CWS using ground water** receives notice of a fecal indicator-positive ground water source sample that is not invalidated by the commissioner under 327 IAC 8-2.3-4(d), the potential health effects using the health effects language of section 17 of this rule.

(B) If directed by the commissioner, a ~~system~~ **CWS** with significant deficiencies that have been corrected before the next report is issued shall inform its customers of the following:

(i) The significant deficiency.

(ii) How the deficiency was corrected.

(iii) The date of the correction under clause (A).

(7) A CWS required to comply with 40 CFR 141, Subpart Y*, shall provide the following notices, as applicable:

(A) Any CWS required to comply with the level 1 assessment requirement or a level 2 assessment requirement, if the level 2 assessment is not due to an E. coli MCL violation, shall include text in the

report as described in the following:

(i) The required report must state, "Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.".

(ii) The report referenced under item (i) must include the following text, as appropriate, with completed blanks:

(AA) "During the past year we were required to conduct (INSERT NUMBER OF LEVEL 1 ASSESSMENTS] level 1 assessment(s). (INSERT NUMBER OF LEVEL 1 ASSESSMENTS] level 1 assessment(s) were completed. In addition, we were required to take (INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed (INSERT NUMBER OF COMPLETED CORRECTIVE ACTIONS] of these actions."

(BB) "During the past year (INSERT NUMBER OF LEVEL 2 ASSESSMENTS] level 2 assessments were required to be completed for our water system. (INSERT NUMBER OF LEVEL 2 ASSESSMENTS] level 2 assessments were completed. In addition, we were required to take (INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF COMPLETED CORRECTIVE ACTIONS] of these actions."

(iii) A CWS that has failed to complete all the required assessments, correct all identified sanitary defects, or is in violation of the treatment technique requirement under 40 CFR 141.859(a)*, must include in the report referenced under item (i) one (1) or both of the following statements, as appropriate:

(AA) "During the past year, we failed to conduct all of the required assessment(s)."

(BB) "During the past year, we failed to correct all identified defects that were found during the assessment(s)."

(B) Any CWS required to conduct a level 2 assessment due to an E. coli MCL violation shall include text in the report as described in the following:

(i) Each required report must include the following text with completed blanks:

(AA) "E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found E. coli bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments."

(BB) "We were required to complete a level 2 assessment because we found E. coli in our water system. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF COMPLETED CORRECTIVE ACTIONS] of these actions."

(ii) A CWS that has failed to complete the required assessment, correct all identified sanitary defects, or is in violation of the treatment technique requirement under 40 CFR 141.859(a)*, must include in the report referenced under item (i) one (1) or both of the following statements, as appropriate:

(AA) "We failed to conduct the required assessment."

(BB) "We failed to correct all sanitary defects that were identified during the assessments we conducted."

(C) If a CWS detects E. coli and has violated the E. coli MCL, in addition to completing the table as required under subsection (e)(4), the CWS must include one (1) or more of the following statements to describe any noncompliance, as applicable:

(i) "We had an E. coli-positive repeat sample following a total coliform-positive routine sample."

(ii) "We had a total coliform-positive repeat sample following an E. coli-positive routine sample."

(iii) "We failed to take all required repeat samples following an E. coli-positive routine sample."

(iv) "We failed to test for E. coli when any repeat sample tests positive for total coliform."

(D) If a CWS detects E. coli and has not violated the E. coli MCL, in addition to completing the table as required under subsection (e)(4), the CWS may include a statement that explains that, although the CWS has detected E. coli, the CWS is not in violation of the E. coli MCL.

~~*The Code of Federal Regulations (CFR) citations~~ ***These documents** are incorporated by reference. ~~into this~~

~~rule and are available from the Superintendent of Documents,~~ **Copies may be obtained from the** Government ~~Printing~~ **Publishing** Office, ~~Washington, D.C. 20402~~ **www.gpo.gov,** or ~~from~~ **are available for review at** the Indiana Department of Environmental Management, Office of ~~Water Quality,~~ **Legal Counsel,** Indiana Government Center North, 100 North Senate Avenue, ~~Room N1255 or N1301,~~ **Thirteenth Floor,** Indianapolis, Indiana 46204.

(Water Pollution Control Division; 327 IAC 8-2.1-3; filed Mar 22, 2000, 3:23 p.m.: 23 IR 1899; filed Jul 23, 2001, 1:02 p.m.: 24 IR 3982; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1098; filed May 1, 2003, 12:00 p.m.: 26 IR 2818; filed Jun 13, 2005, 2:30 p.m.: 28 IR 3223; errata filed Jul 6, 2005, 3:15 p.m.: 28 IR 3583; errata filed Feb 6, 2006, 11:15 a.m.: 29 IR 1937; filed Jul 13, 2007, 11:58 a.m.: 20070808-IR-327060044FRA; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA)

SECTION 11. 327 IAC 8-2.1-6 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.1-6 Other required information

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-6; IC 13-18-16-7; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 6. (a) In order to convert MCLs to numbers greater than or equal to one and zero-tenths (1.0) for the required table referenced in section 3 of this rule, a CWS shall use the following table:

Table 6-1: Converting MCL Compliance Values for Consumer Confidence Reports

Contaminant	MCL in Compliance Units (mg/l)	multiply by...	MCL in CCR Units	MCLG in CCR Units
Microbiological contaminants				
~~1.~~ **1a.** Total coliform bacteria[1]	5% of monthly samples are positive ~~(systems~~ **(CWSs** that collect forty (40) or more samples per month); one (1) positive monthly sample ~~(systems~~ **(CWSs** that collect fewer than forty (40) samples per month).		5% of monthly samples are positive ~~(systems~~ **(CWSs** that collect forty (40) or more samples per month); one (1) positive monthly sample ~~(systems~~ **(CWSs** that collect fewer than forty (40) samples per month).	0
1b. Total coliform bateria[2]	**TT**		**TT**	**n/a**
~~2.~~ **2a.** Fecal coliform and E. coli[1]	0		~~A routine sample and a repeat sample are total coliform positive, and one (1) is also fecal coliform or E. coli positive.~~ **0**	0
2b. E. coli [2]	**Routine and repeat samples are total coliform-positive and either is E. coli-positive or the CWS fails to take repeat samples**		**Routine and repeat samples are total coliform-positive and either is E. coli-positive or the CWS fails to take repeat samples following E. coli-positive routine**	**0**

	following E. coli-positive routine sample or the CWS fails to analyze total coliform-positive repeat sample for E. coli.		**sample or the CWS fails to analyze total coliform-positive repeat sample for E. coli.**	
3. Total organic carbon	TT		TT	n/a
4. Turbidity	TT		TT (NTU)	n/a
Radioactive contaminants				
5. Beta/photon emitters	4 mrem/year		4 mrem/year	0
6. Alpha emitters	15 pCi/l		15 pCi/l	0
7. Combined radium	5 pCi/l		5 pCi/l	0
8. Uranium	0.030	1,000	30 ppb	0
Inorganic contaminants				
9. Antimony	0.006	1,000	6 ppb	6
10. Arsenic	0.010 [1] [3]	1,000	10[1] ppb	0[1]
11. Asbestos	7 MFL		7 MFL	7
12. Barium	2		2 ppm	2
13. Beryllium	0.004	1,000	4 ppb	4
14. Bromate	0.10	1,000	10 ppb	0
15. Cadmium	0.005	1,000	5 ppb	5
16. Chloramines	MRDL = 4.0		MRDL = 4.0 ppm	MRDLG = 4
17. Chlorine	MRDL = 4.0		MRDL = 4.0 ppm	MRDLG = 4
18. Chlorine dioxide	MRDL = 0.8	1,000	MRDL = 800 ppb	MRDLG = 800
19. Chlorite	1		1 ppm	0.8
20. Chromium	0.1	1,000	100 ppb	100
21.Copper	AL = 1.3		AL = 1.3 ppm	1.3
22. Cyanide	0.2	1,000	200 ppb	200
23. Fluoride	4		4 ppm	4
24. Lead	AL = 0.015	1,000	AL = 15 ppb	0
25. Mercury (inorganic)	0.002	1,000	2 ppb	2
26. Nitrate (as nitrogen)	10		10 ppm	10
27. Nitrite (as nitrogen)	1		1 ppm	1
28. Selenium	0.05	1,000	50 ppb	50
29. Thallium	0.002	1,000	2 ppb	0.5
Synthetic organic contaminants including pesticides and herbicides				
30. 2,4-D	0.07	1,000	70 ppb	70
31. 2,4,5-TP (silvex)	0.05	1,000	50 ppb	50
32. Acrylamide	TT		TT	0
33. Alachlor	0.002	1,000	2 ppb	0
34. Atrazine	0.003	1,000	3 ppb	3
35. Benzo(a)pyrene (PAH)	0.0002	1,000,000	200 ppt	0
36. Carbofuran	0.04	1,000	40 ppb	40
37. Chlordane	0.002	1,000	2 ppb	0
38. Dalapon	0.2	1,000	200 ppb	200
39. Di(2-ethylhexyl)adipate	.4	1,000	400 ppb	400
40. Di(2-ethylhexyl)phthalate	0.006	1,000	6 ppb	0
41. Dibromochloropropane	0.0002	1,000,000	200 ppt	0

42. Dinoseb	0.007	1,000	7 ppb	7
43. Diquat	0.02	1,000	20 ppb	20
44. Dioxin (2,3,7,8-TCDD)	0.00000003	1,000,000,000	30 ppq	0
45. Endothall	0.1	1,000	100 ppb	100
46. Endrin	0.002	1,000	2 ppb	2
47. Epichlorohydrin	TT		TT	0
48. Ethylene dibromide	0.00005	1,000,000	50 ppt	0
49. Glyphosate	0.7	1,000	700 ppb	700
50. Heptachlor	0.0004	1,000,000	400 ppt	0
51. Heptachlor epoxide	0.0002	1,000,000	200 ppt	0
52. Hexachlorobenzene	0.001	1,000	1 ppb	0
53. Hexachlorocyclopentadiene	0.05	1,000	50 ppb	50
54. Lindane	0.0002	1,000,000	200 ppt	200
55. Methoxychlor	0.04	1,000	40 ppb	40
56. Oxamyl (vydate) 0.2	1,000	200 ppb	200	
57. PCBs (polychlorinated biphenyls)	0.0005	1,000,000	500 ppt	0
58. Pentachlorophenol	0.001	1,000	1 ppb	0
59. Picloram	0.5	1,000	500 ppb	500
60. Simazine	0.004	1,000	4 ppb	4
61. Toxaphene	0.003	1,000	3 ppb	0
Volatile organic contaminants				
62. Benzene	0.005	1,000	5 ppb	0
63. Carbon tetrachloride	0.005	1,000	5 ppb	0
64. Chlorobenzene	0.1	1,000	100 ppb	100
65. o-Dichlorobenzene	0.6	1,000	600 ppb	600
66. p-Dichlorobenzene	0.075	1,000	75 ppb	75
67. 1,2-Dichloroethane	0.005	1,000	5 ppb	0
68. 1,1-Dichloroethylene	0.007	1,000	7 ppb	7
69. cis-1,2-Dichloroethylene	0.07	1,000	70 ppb	70
70. trans-1,2-Dichloroethylene	0.1	1,000	100 ppb	100
71. Dichloromethane	0.005	1,000	5 ppb	0
72. 1,2-Dichloropropane	0.005	1,000	5 ppb	0
73. Ethylbenzene	0.7	1,000	700 ppb	700
74. ~~Haloacetic acids (HAA)~~ **HAA5**	0.060	1,000	60 ppb	n/a
75. Styrene	0.1	1,000	100 ppb	100
76. Tetrachloroethylene	0.005	1,000	5 ppb	0
77. 1,2,4-Trichlorobenzene	0.07	1,000	70 ppb	70
78. 1,1,1-Trichloroethane	0.2	1,000	200 ppb	200
79. 1,1,2-Trichloroethane	0.005	1,000	5 ppb	3
80. Trichloroethylene	0.005	1,000	5 ppb	0
81. TTHMs (total trihalomethanes)	0.080	1,000	80 ppb	n/a
82. Toluene	1		1 ppm	1
83. Vinyl chloride	0.002	1,000	2 ppb	0
84. Xylenes	10		10 ppm	10

[1]Until March 31, 2016.

[2]Beginning April 1, 2016.

[1] [3] These arsenic values are effective January 1, 2006. Until then, the MCL is 0.05 mg/L and there is no MCLG.

Key:
AL = Action level.
MCL = Maximum contaminant level.
MCLG = Maximum contaminant level goal.
MFL = Million fibers per liter.
MRDL = Maximum residual disinfectant level.
MRDLG = Maximum residual disinfectant level goal.
mrem/year = Millirems per year (a measure of radiation absorbed by the body).
N/A = Not applicable
NTU = Nephelometric turbidity units.
pCi/l = Picocuries per liter (a measure of radioactivity).
ppm = Parts per million, or milligrams per liter (mg/l).
ppb = Parts per billion, or micrograms per liter (µg/l).
ppt = Parts per trillion, or nanograms per liter (ng/l).
ppq = Parts per quadrillion, or picograms per liter (pg/l).
TT = Treatment technique.

(b) In order to show potential sources of contamination for the table required by section 3 of this rule, a CWS shall use the following table:

Table 6-2: Regulated Contaminants			
Contaminant (units)	MCLG	MCL	Major Sources in Drinking Water
Microbiological contaminants			
~~1.~~ **1a.** Total coliform bacteria[1]	0	5% of monthly samples are positive (~~systems~~ **(CWSs** that collect forty (40) or more samples per month); one (1) positive monthly sample (~~systems~~ **(CWSs** that collect fewer than forty (40) samples per month).	Naturally present in the environment.
1b. Total coliform bacteria[2]	**n/a**	**TT**	**Naturally present in the environment.**
~~2.~~ **2a.** Fecal coliform and E. coli [1]	0	A routine sample and a repeat sample are total coliform positive, and one (1) is also fecal coliform or E. coli positive.	Human and animal fecal waste.
2b. E. coli[2]	**0**	**Routine and repeat samples are total coliform-positive and either is E. coli-positive or the CWS fails to take repeat samples following E. coli-positive routine sample or the CWS fails**	**Human and animal fecal waste.**

		to analyze total coliform-positive repeat sample for E. coli.	
3. Total organic carbon	n/a	TT	Naturally present in the environment.
4. Turbidity	n/a	TT	Soil run-off.
Radioactive contaminants			
5. Beta/photon emitters (mrem/year)	0	4	Decay of natural and manmade deposits.
6. Alpha emitters (pCi/l)	0	15	Erosion of natural deposits.
7. Combined radium (pCi/l)	0	5	Erosion of natural deposits.
8. Uranium (ppb)	0	30	Erosion of natural deposits.
Inorganic contaminants			
9. Antimony (ppb)	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
10. Arsenic (ppb)	0~~[13]~~	10~~[13]~~	Erosion of natural deposits; run-off from orchards; run-off from glass and electronics production wastes.
11. Asbestos (MFL)	7	7	Decay of asbestos cement water mains; erosion of natural deposits.
12. Barium (ppm)	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
13. Beryllium (ppb)	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries.
14. Bromate (ppb)	0	10	Byproduct of drinking water disinfection.
15. Cadmium (ppb)	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; run-off from waste batteries and paints.
16. Chloramines (ppm)	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes.
17. Chlorine (ppm)	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes.
18. Chlorine dioxide (ppb)	MRDLG = 800	MRDL = 800	Water additive used to control microbes.
19. Chlorite (ppm)	0.8	1	Byproduct of drinking water disinfection.
20. Chromium (ppb)	100	100	Discharge from steel and pulp mills; erosion of natural deposits.
21. Copper (ppm)	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
22. Cyanide (ppb)	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories.
23. Fluoride (ppm)	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
24. Lead (ppb)	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits.
25. Mercury (inorganic) (ppb)	2	2	Erosion of natural deposits;

			discharge from refineries and factories; run-off from landfills; run-off from cropland.
26. Nitrate (as nitrogen) (ppm)	10	10	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
27. Nitrite (as nitrogen) (ppm)	1	1	Run-off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
28. Selenium (ppb)	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
29. Thallium (ppb)	0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories.
Synthetic organic contaminants, including pesticides and herbicides			
30. 2,4-D (ppb)	70	70	Run-off from herbicide used on row crops.
31. 2,4,5-TP (Silvex) (ppb)	50	50	Residue of banned herbicide.
32. Acrylamide	0	TT	Added to water during sewage/wastewater treatment.
33. Alachlor (ppb)	0	2	Run-off from herbicide used on row crops.
34. Atrazine (ppb)	3	3	Run-off from herbicide used on row crops.
35. Benzo(a)pyrene (PAH) (ppt)	0	200	Leaching from linings of water storage tanks and distribution lines.
36. Carbofuran (ppb)	40	40	Leaching of soil fumigant used on rice and alfalfa.
37. Chlordane (ppb)	0	2	Residue of banned termiticide.
38. Dalapon (ppb)	200	200	Run-off from herbicide used on rights-of-way.
39. Di(2-ethylhexyl)adipate (ppb)	400	400	Discharge from chemical factories.
40. Di(2-ethylhexyl)phthalate (ppb)	0	6	Discharge from rubber and chemical factories.
41. Dibromochloropropane (ppt)	0	200	Run-off/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
42. Dinoseb (ppb)	7	7	Run-off from herbicide used on soybeans and vegetables.
43. Diquat (ppb)	20	20	Run-off from herbicide use.
44. Dioxin (2,3,7,8-TCDD) (ppq)	0	30	Emissions from waste incineration and other combustion; discharge from chemical factories.
45. Endothall (ppb)	100	100	Run-off from herbicide use.
46. Endrin (ppb)	2	2	Residue of banned insecticide.
47. Epichlorohydrin	0	TT	Discharge from industrial chemical factories; an impurity of some water treatment chemicals.
48. Ethylene dibromide (ppt)	0	50	Discharge from petroleum refineries.
49. Glyphosate (ppb)	700	700	Run-off from herbicide use.
50. Heptachlor (ppt)	0	400	Residue of banned pesticide.
51. Heptachlor epoxide (ppt)	0	200	Breakdown of heptachlor.
52. Hexachlorobenzene (ppb)	0	1	Discharge from metal refineries and agricultural chemical factories.
53. Hexachlorocyclopentadiene (ppb)	50	50	Discharge from chemical factories.

54. Lindane (ppt)	200	200	Run-off/leaching from insecticide used on cattle, lumber, and gardens.
55. Methoxychlor (ppb)	40	40	Run-off/leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
56. Oxamyl (vydate) (ppb)	200	200	Run-off/leaching from insecticide used on apples, potatoes, and tomatoes.
57. PCBs (polychlorinated biphenyls) (ppt)	0	500	Run-off from landfills; discharge of waste chemicals.
58. Pentachlorophenol (ppb)	0	1	Discharge from wood preserving factories.
59. Picloram (ppb)	500	500	Herbicide run-off.
60. Simazine (ppb)	4	4	Herbicide run-off.
61. Toxaphene (ppb)	0	3	Run-off/leaching from insecticide used on cotton and cattle.
Volatile organic contaminants			
62. Benzene (ppb)	0	5	Discharge from factories; leaching from gas storage tanks and landfills.
63. Carbon tetrachloride (ppb)	0	5	Discharge from chemical plants and other industrial activities.
64. Chlorobenzene (ppb)	100	100	Discharge from chemical and agricultural chemical factories.
65. o-Dichlorobenzene (ppb)	600	600	Discharge from industrial chemical factories.
66. p-Dichlorobenzene (ppb)	75	75	Discharge from industrial chemical factories.
67. 1,2-Dichloroethane (ppb)	0	5	Discharge from industrial chemical factories.
68. 1,1-Dichloroethylene (ppb)	7	7	Discharge from industrial chemical factories.
69. cis-1,2-Dichloroethylene (ppb)	70	70	Discharge from industrial chemical factories.
70. trans-1,2-Dichloroethylene (ppb)	100	100	Discharge from industrial chemical factories.
71. Dichloromethane (ppb)	0	5	Discharge from pharmaceutical and chemical factories.
72. 1,2-Dichloropropane (ppb)	0	5	Discharge from industrial chemical factories.
73. Ethylbenzene (ppb)	700	700	Discharge from petroleum refineries.
74. ~~Haloacetic Acids (HAA)~~ **HAA5** (ppb)	n/a	60	Byproduct of drinking water disinfection.
75. Styrene (ppb)	100	100	Discharge from rubber and plastic factories; leaching from landfills.
76. Tetrachloroethylene (ppb)	0	5	Discharge from factories and dry cleaners.
77. 1,2,4-Trichlorobenzene (ppb)	70	70	Discharge from textile-finishing factories.
78. 1,1,1-Trichloroethane (ppb)	200	200	Discharge from metal degreasing sites and other factories.
79. 1,1,2-Trichloroethane (ppb)	3	5	Discharge from industrial chemical factories.
80. Trichloroethylene (ppb)	0	5	Discharge from metal degreasing sites and other factories.
81. TTHMs (total trihalomethanes) (ppb)	n/a	80	Byproduct of drinking water chlorination.
82. Toluene (ppm)	1	1	Discharge from petroleum factories.

83. Vinyl chloride (ppb)	0	2	Leaching from PVC piping; discharge from plastics factories.
84. Xylenes (ppm)	10	10	Discharge from petroleum factories; discharge from chemical factories.
[1]Until March 31, 2016.			
[2]Beginning April 1, 2016.			
~~1~~ **3** These arsenic values are effective January 1, 2006. Until then, the MCL is 0.05 mg/l and there is no MCLG.			
Key:			
AL = Action level.			
MCL = Maximum contaminant level.			
MCLG = Maximum contaminant level goal.			
MFL = Million fibers per liter.			
MRDL = Maximum residual disinfectant level.			
MRDLG = Maximum residual disinfectant level goal.			
mrem/year = millirems per year (a measure of radiation absorbed by the body).			
N/A = Not applicable.			
NTU = Nephelometric turbidity units.			
pCi/l = Picocuries per liter (a measure of radioactivity).			
ppm = Parts per million, or milligrams per liter (mg/l).			
ppb = Parts per billion, or micrograms per liter (µg/l).			
ppt = Parts per trillion, or nanograms per liter (ng/l).			
ppq = Parts per quadrillion, or picograms per liter (pg/l).			
TT = Treatment technique.			

(c) The language in section 17 of this rule ~~shall~~ **must** be used if there is a violation referenced in section 3 of this rule and health effects language is required.

(Water Pollution Control Division; 327 IAC 8-2.1-6; filed Mar 22, 2000, 3:23 p.m.: 23 IR 1903; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1100; filed May 1, 2003, 12:00 p.m.: 26 IR 2822; filed Jun 13, 2005, 2:30 p.m.: 28 IR 3227)

SECTION 12. 327 IAC 8-2.1-8 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.1-8 Tier 1 public notice; form, manner, and frequency of notice

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 8. (a) The following violations or situations require a Tier 1 public notice to be provided according to subsections (b) and (c):

(1) **A** violation:

(A) until March 31, 2016:

(i) of the MCL for total coliforms when fecal coliform or E. coli are present in the water distribution system as specified in 327 IAC 8-2-7(b); or

(ii) incurred because the ~~water system~~ **PWS** fails to test for fecal coliforms or E. coli when any repeat sample tests positive for coliform as specified in 327 IAC 8-2-8.3; **and**

(B) after April 1, 2016, of the MCL for E. coli as specified in 327 IAC 8-2-7(c).

(2) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, as defined in 327 IAC 8-2-4, or when the ~~water system~~ **PWS** fails to take a confirmation sample within twenty-four (24) hours of the ~~system's~~ **PWS's** receipt of the first sample showing an exceedance of the nitrate or nitrite MCL, as specified in 327 IAC 8-2-4.1(h)(2).

(3) Exceedance of the nitrate MCL by NCWS, where permitted to exceed the MCL by the commissioner under

327 IAC 8-2-4 and section 14 of this rule.
(4) Violation of the 327 IAC 8-2-8.5(c) or 327 IAC 8-2.6-1 treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit as identified in section 16 of this rule, where:
(A) the commissioner determines after consultation that a Tier 1 notice is required; or
(B) consultation does not take place within twenty-four (24) hours after the ~~system~~ **PWS** learns of the violation.
(5) Occurrence of a waterborne disease outbreak, as defined in 327 IAC 8-2-1, or other waterborne emergency. This includes:
(A) failure or significant interruption in key water treatment processes;
(B) a natural disaster that disrupts the water supply or distribution system; or
(C) a chemical spill or unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination.
(6) Other violations or situations with significant potential to have serious adverse effects on human health as a result of short term exposure, as determined by the commissioner either in its regulations or on a case-by-case basis.
(7) Violation of the MRDL for chlorine dioxide as defined in 327 IAC 8-2.5-3(a) and determined according to 327 IAC 8-2.5-5 when:
(A) one (1) or more samples taken in the distribution system the day following an exceedance of the MRDL at the entrance of the distribution system exceed the MRDL; or
(B) the ~~water system~~ **PWS** does not take the required samples in the distribution system, as specified in 327 IAC 8-2.5-7(c)(2).
(8) Detection of:
(A) E. coli;
(B) enterococci; or
(C) coliphage;
in source water samples as specified in 327 IAC 8-2.3-4(a) and 327 IAC 8-2.3-4(b).
(9) Other violations or situations with significant potential to have serious adverse effects on human health as a result of short term exposure, as determined by the commissioner either in this article or on a case-by-case basis.

(b) Tier 1 public notice needs to be provided as follows:
(1) Provide a public notice as soon as practical but not later than twenty-four (24) hours after the ~~system~~ **PWS** learns of the violation.
(2) Initiate consultation with the commissioner as soon as practical, but not later than twenty-four (24) hours after the PWS learns of the violation or situation, to determine additional public notice requirements.
(3) Comply with any additional public notification requirements that are established as a result of the consultation with the commissioner, including any repeat notices or direction on the duration of the posted notices. To reach all persons served, ~~such~~ **the additional public notification** requirements may include the following:
(A) Timing.
(B) Form.
(C) Manner.
(D) Frequency.
(E) Content of repeat notices and other actions designed.
(4) ~~PWSs~~ **A PWS** shall provide the notice within twenty-four (24) hours in a form and manner reasonably calculated to reach all persons served. The form and manner used by the PWS are to fit the specific situation, but they must be designed to reach residential, transient, and nontransient users of the ~~water system.~~ **PWS.** In order to reach all persons served, ~~water systems~~ **PWSs** are to use, at a minimum, one (1) or more of the following forms of delivery:
(A) Appropriate broadcast media, such as:
(i) radio; or
(ii) television.
(B) Posting of the notice in conspicuous locations throughout the area served by the ~~water system.~~ **PWS.**
(C) Hand delivery of the notice to persons served by the ~~water system.~~ **PWS.**
(D) Another delivery method approved in writing by the commissioner.
(5) A CWS shall give a copy of the most recent public notice to all new billing units or new hookups before or at the time service begins for any of the following outstanding violations:
(A) Any MCL.
(B) Any MRDL.
(C) Any treatment technique requirement.

(c) For violations of the MRDLs of disinfectants that may pose an acute risk to human health, a copy of the notice must be furnished to the radio and television stations serving the area served by the PWS as soon as possible but in no case later than seventy-two (72) hours after the violation.

(Water Pollution Control Division; 327 IAC 8-2.1-8; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1110; filed May 1, 2003, 12:00 p.m.: 26 IR 2828; filed Jun 13, 2005, 2:30 p.m.: 28 IR 3233; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA)

SECTION 13. 327 IAC 8-2.1-9 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.1-9 Tier 2 notice; form, manner, and frequency of notice

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-6; IC 13-18-16-7; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 9. (a) The following violations or situations require a Tier 2 public notice to be provided according to subsections (b) and (c):

(1) All violations of the MCL, MRDL, and treatment technique requirements, except where:
  (A) a Tier 1 notice is required under section 8(a) of this rule; or
  (B) the commissioner determines a Tier 1 notice is required.

(2) Violations of the monitoring and testing procedure requirements, where the commissioner determines that a Tier 2 rather than a Tier 3 public notice is required, taking into account potential health impacts and persistence of the violation.

(3) Failure to:
  (A) take corrective action; or
  (B) maintain at least 4-log treatment of viruses using:
    (i) inactivation;
    (ii) removal; or
    (iii) a commissioner-approved combination of 4-log virus inactivation and removal;
  before or at the first customer under 327 IAC 8-2.3-5(a).

(b) Tier 2 public notice needs to be provided as follows:

(1) ~~PWSs~~ **A PWS** shall provide the public notice as soon as practical, but not later than thirty (30) days after the ~~system~~ **PWS** learns of the violation, and in accord with the following:
  (A) If the public notice is posted, the notice must remain in place for as long as the violation or situation persists, but in no case for less than seven (7) days, even if the violation or situation is resolved.
  (B) The commissioner may, in appropriate circumstances, allow additional time for the initial notice of up to three (3) months from the date the ~~system~~ **PWS** learns of the violation.
  (C) It is not appropriate for the commissioner to:
    (i) grant an extension to the thirty (30) day deadline for any unresolved violation; or
    (ii) allow across-the-board extensions by rule or policy for other violations or situations requiring a Tier 2 public notice.
  (D) Extensions granted by the commissioner must be in writing.

(2) The PWS shall repeat the notice every three (3) months as long as the violation or situation persists and in accord with the following:
  (A) The commissioner determines that appropriate circumstances warrant a different repeat notice frequency.
  (B) In no circumstance may the repeat notice be given less frequently than once per year.
  (C) It is not appropriate for the commissioner to allow less frequent repeat notice for **any of the following:**
    (i) An MCL **or treatment technique** violation under ~~the~~ 327 IAC 8-2-7, 327 IAC 8-2-8, 327 IAC 8-2-8.1, ~~and~~ 327 IAC 8-2-8.3, ~~or~~ **and 40 CFR 141, Subpart Y*.**
    (ii) A treatment technique violation under 327 IAC 8-2-8.5, 327 IAC 8-2-8.6, and 327 IAC 8-2-8.8.
  (D) The commissioner's determinations must be in writing to allow repeat notices to be given less frequently than once every three (3) months.

(3) If there is a violation of the treatment technique requirement in 327 IAC 8-2-8.5(c) or 327 IAC 8-2.6-1 that results from a single exceedance of the maximum allowable turbidity limit, then ~~PWSs~~ **a PWS** shall do the following:
  (A) Consult with the commissioner as soon as practical but not later than twenty-four (24) hours after the

PWS learns of the violation, to determine whether a Tier 1 public notice under section 8(a) of this rule is required to protect public health.

(B) When consultation does not take place within the twenty-four (24) hour period, the ~~water system~~ **PWS** shall distribute a Tier 1 notice of the violation within the next twenty-four (24) hours (for example, not later than forty-eight (48) hours after the ~~system~~ **PWS** learns of the violation), following the requirements under section 8(b) and 8(c) of this rule.

(c) ~~PWSs~~ **A CWS** shall provide the initial public notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but the public notice must at a minimum meet the following requirements:

(1) Unless directed otherwise by the commissioner in writing, ~~CWSs~~ **a CWS** shall provide notice by the following methods:

(A) Mail or other direct delivery to:

(i) each customer receiving a bill; and

(ii) other service connections to which water is delivered by the ~~PWS.~~ **CWS.**

(B) Any other method reasonably calculated to reach other persons regularly served by the ~~system,~~ **CWS,** if ~~they~~ **the persons** would not normally be reached by the notice required in clause (A). The persons may include those who do not pay water bills or do not have service connection addresses, including any of the following:

(i) House renters.

(ii) Apartment dwellers.

(iii) University students.

(iv) Nursing home patients.

(v) Prison inmates.

(C) Other methods may include any of the following:

(i) Publication in a local newspaper.

(ii) Delivery of multiple copies for distribution by customers that provide their drinking water to others, such as:

(AA) apartment building owners; or

(BB) large private employers.

(iii) Posting:

(AA) in public places served by the ~~system;~~ **CWS;** or

(BB) on the Internet.

(iv) Delivery to community organizations.

(2) Unless directed otherwise by the commissioner in writing, ~~NCWSs~~ **a NCWS** shall provide notice by the following methods:

(A) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the ~~system.~~ **NCWS.**

(B) By mail or direct delivery to each customer and service connection if known.

(C) Any other method reasonably calculated to reach other persons served by the ~~system~~ **NCWS** if ~~they~~ **the persons** would not normally be reached by the notice required in clauses (A) and (B). The persons may include those served who may not see a posted notice because the posted notice is not in a location they routinely pass by. Other methods may include:

(i) publication in a local newspaper or newsletter distributed to customers;

(ii) use of e-mail to notify employees or students; or

(iii) delivery of multiple copies in central locations, such as community centers.

***This document is incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Thirteenth Floor, Indianapolis, Indiana 46204.**

(Water Pollution Control Division; 327 IAC 8-2.1-9; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1110; filed Jun 13, 2005, 2:30 p.m.: 28 IR 3234; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA)

SECTION 14. 327 IAC 8-2.1-10 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.1-10 Tier 3 public notice; form, manner, and frequency of notice

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-6; IC 13-18-16-7; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 10. (a) The following violations or situations require a Tier 3 public notice:
(1) Monitoring violations under 327 IAC 8-2, except where:
(A) a Tier 1 notice is required under section 8 of this rule; or
(B) the commissioner determines that a Tier 2 notice is required.
(2) Failure to comply with a testing procedure established in 327 IAC 8-2, except where:
(A) a Tier 1 notice is required under section 8(a) of this rule; or
(B) the commissioner determines that a Tier 2 notice is required.
(3) Exceedance of the fluoride secondary maximum contaminant level (SMCL) as required under section 13 of this rule.
(4) Availability of unregulated contaminant monitoring results as required under section 14.5 of this rule.
(5) Reporting and record keeping violations under 40 CFR 141, Subpart Y*.

(b) Tier 3 public notice needs to be provided as follows:
(1) ~~Public water systems~~ **A PWS** must provide the public notice not later than one (1) year after the ~~public water system~~ **PWS** learns of the violation or situation. Following the initial notice, the ~~public water system~~ **PWS** must repeat the notice annually for as long as the violation or other situation persists. If the public notice is posted, the notice must remain in place for as long as the violation or other situation persists, but in no case less than seven (7) days even if the violation or situation is resolved.
(2) Instead of individual Tier 3 public notices, a ~~public water system~~ **PWS** may use an annual report detailing all violations and situations that occurred during the previous twelve (12) months, as long as the timing requirements of subdivision (1) are met.

(c) ~~Public water systems~~ **A PWS** must provide the initial notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it must, at a minimum, meet the following requirements:
(1) Unless directed otherwise by the commissioner in writing, ~~community water systems~~ **a CWS** must provide notice by the following methods:
(A) Mail or other direct delivery to the following:
(i) Each customer receiving a bill.
(ii) Other service connections to which water is delivered by the ~~public water system.~~ **CWS.**
(B) Any other method reasonably calculated to reach other persons regularly served by the ~~system,~~ **CWS,** if ~~they~~ **the persons** would not normally be reached by the notice required in clause (A). These persons may include those who do not pay water bills or do not have service connection addresses, such as any of the following:
(i) House renters.
(ii) Apartment dwellers.
(iii) University students.
(iv) Nursing home patients.
(v) Prison inmates.
(C) Other methods may include any of the following:
(i) Publication in a local newspaper.
(ii) Delivery of multiple copies for distribution by customers that provide their drinking water to others, such as either of the following:
(AA) Apartment building owners.
(BB) Large private employers.
(iii) Posting in public places or on the Internet.
(iv) Delivery to community organizations.
(2) Unless directed otherwise by the commissioner in writing, ~~noncommunity water systems~~ **a NCWS** must provide notice by the following methods:
(A) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the ~~system,~~ **NCWS,** or by mail or direct delivery to each customer and service connection if known.
(B) Any other method reasonably calculated to reach other persons served by the ~~system,~~ **NCWS,** if ~~they~~ **the persons** would not normally be reached by the notice required in item (i). ~~Such~~ **The** persons **to be reached** may include those who may not see a posted notice because the notice is not in a location they

routinely pass by. Other methods may include any of the following:
(i) Publication in a local newspaper or newsletter distributed to customers.
(ii) Use of e-mail to notify employees or students.
(iii) Delivery of multiple copies in central locations such as community centers.

(d) For ~~community water systems,~~ **a CWS,** the consumer confidence report (CCR) required under sections 1 through 6 of this rule may be used as a vehicle for the initial Tier 3 public notice and all required repeat notices as long as:
(1) the CCR is provided to persons served not later than twelve (12) months after the ~~system~~ **CWS** learns of the violation or situation as required in this section;
(2) the Tier 3 notice contained in the CCR follows the content requirements under section 11 of this rule; and
(3) the CCR is distributed following the delivery requirements under subsection (c).

***This document is incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Thirteenth Floor, Indianapolis, Indiana 46204.**

(Water Pollution Control Division; 327 IAC 8-2.1-10; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1111; filed Jul 13, 2007, 11:58 a.m.: 20070808-IR-327060044FRA)

SECTION 15. 327 IAC 8-2.1-16 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.1-16 Drinking water violations; other situations requiring public notice

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 16. (a) Drinking water violations and other situations that require public notice according to this rule are contained in the following table:

Table 16. Drinking Water Violations and Other Situations Requiring Public Notice				
Contaminant	MCL/MRDL/TT/AL Violations		Monitoring and Testing Procedure Violations	
	Tier of Public Notice Required	Citation	Tier of Public Notice Required	Citation
I. Violations of Drinking Water Regulations:				
A. Microbiological Contaminants				
~~1.~~ **1a.** Total coliform [1]	2	327 IAC 8-2-7(a)	3	327 IAC 8-2-8; 327 IAC 8-2-8.1; 327 IAC 8-2-8(f); 327 IAC 8-2-8.2; 327 IAC 8-2-8.3
1b. Total coliform (Monitoring or TT violations resulting from failure to perform assessments or corrective actions, monitoring violations, and reporting violations) [2]	**2**	**40 CFR 141.860(b)(1)***	**3**	**40 CFR 141.860(c)(1) and 40 CFR 141.860(d)(1)***
1c. Seasonal system failure to follow state-approved start-up plan prior to serving water to the public	**2**	**40 CFR 141.860(b)(2)***	**3**	**40 CFR 141.860(d)(3)***

or failure to provide certification to the commissioner.[2]				
~~2.~~ **2a.** Fecal coliform/E. coli [1]	1	327 IAC 8-2-7(b)	1, 3 **(see subsection (b)(2))**	327 IAC 8-2-8.3
2b. E. coli[2]	**1**	**40 CFR 141.860(a)***	**3**	**40 CFR 141.860(c)(1), 40 CFR 141.860(d)(1), and 40 CFR 141.860(d)(2)***
2c. E. coli (TT violations resulting from failure to perform level 2 assessments or corrective action) [2]	**2**	**40 CFR 141.860(b)(1)***		
3. Turbidity (resulting from a single exceedance of maximum allowable turbidity levels) (TT)	2,1	327 IAC 8-2-8.5(a); 327 IAC 8-2.6-3(1)(B); 327 IAC 8-2.6-3(2); 327 IAC 8-2.6-3(3)	3	327 IAC 8-2-8.8(b); 327 IAC 8-2.6-4
4. Surface water treatment rule violations, other than violations resulting from single exceedance of maximum allowable turbidity level (TT)	2	327 IAC 8-2-8.5; 327 IAC 8-2-8.6	3	327 IAC 8-2-8.8
5. Interim enhanced surface water treatment rule violations, other than violations resulting from single exceedance of maximum allowable turbidity level (TT)	2	327 IAC 8-2.6-1; 327 IAC 8-2.6-2; 327 IAC 8-2.6-3	3	327 IAC 8-2.6-2; 327 IAC 8-2.6-4
6. Filter backwash recycling rule	2	327 IAC 8-2.6-6	3	327 IAC 8-2.6-6
7. Long term 1 enhanced surface water treatment rule violations, other than violations resulting from single exceedance of maximum allowable turbidity level (TT)	2	327 IAC 8-2.6-1; 327 IAC 8-2.6-2.1; 327 IAC 8-2.6-3	3	327 IAC 8-2.6-2.1; 327 IAC 8-2.6-4
8. Long term 2 enhanced surface water treatment rule violations	2	327 IAC 8-2.6-11 through 327 IAC 8-2.6-20	2, 3	327 IAC 8-2.6-8(b)(1) through 327 IAC 8-2.6-8(b)(5) and 327 IAC 8-2.6-9 and 327 IAC 8-2.6-10
9. Ground water rule violations	2	327 IAC 8-2.3-6	3	327 IAC 8-2.3-4(h); 327 IAC 8-2.3-6(d)
B. Inorganic Chemicals (IOCs)				
1. Antimony	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)
2. Arsenic	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)
3. Asbestos (fibers >10 µm)	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(d)
4. Barium	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)
5. Beryllium	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)

6. Cadmium	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)
7. Chromium (total)	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)
8. Cyanide	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)
9. Fluoride	2	327 IAC 8-2-4(c)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)
10. Mercury (inorganic)	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)
11. Nitrate	1	327 IAC 8-2-4(b)	1, 3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(f); 327 IAC 8-2-4.1(h)(2)
12. Nitrite	1	327 IAC 8-2-4(b)	1, 3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(g); 327 IAC 8-2-4.1(h)(2)
13. Total nitrate and nitrite	1	327 IAC 8-2-4(b)	3	327 IAC 8-2-4.1(c)
14. Selenium	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)
15. Thallium	2	327 IAC 8-2-4(d)	3	327 IAC 8-2-4.1(c); 327 IAC 8-2-4.1(e)
C. Lead and Copper Rule				
1. Lead and copper rule (TT)	2	327 IAC 8-2-36; 327 IAC 8-2-40; 327 IAC 8-2-41; 327 IAC 8-2-42; 327 IAC 8-2-43; 327 IAC 8-2-44	3	327 IAC 8-2-37; 327 IAC 8-2-38; 327 IAC 8-2-39; 327 IAC 8-2-45
D. Synthetic Organic Chemicals (SOCs)				
1. 2,4-D	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
2. 2,4,5-TP (silvex)	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
3. Alachlor	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
4. Atrazine	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
5. Benzo[a]pyrene (PAHs)	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
6. Carbofuran	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
7. Chlordane	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
8. Dalapon	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
9. Di (2-ethylhexyl) adipate	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
10. Di (2-ethylhexyl) phthalate	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
11. Dibromochloropropane	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
12. Dinoseb	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
13. Dioxin (2,3,7,8-TCDD)	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
14. Diquat	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
15. Endothall	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
16. Endrin	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
17. Ethylene dibromide	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
18. Glyphosate	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
19. Heptachlor	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
20. Heptachlor epoxide	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
21. Hexachlorobenzene	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
22. Hexachlorocyclopentadiene	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
23. Lindane	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
24. Methoxychlor	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
25. Oxamyl (vydate)	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
26. Pentachlorophenol	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
27. Picloram	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
28. Polychlorinated biphenyls	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1

(PCBs)				
29. Simazine	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
30. Toxaphene	2	327 IAC 8-2-5(a)	3	327 IAC 8-2-5.1
E. Volatile Organic Chemicals (VOCs)				
1. Benzene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
2. Carbon tetrachloride	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
3. Chlorobenzene (monochlorobenzene)	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
4. o-Dichlorobenzene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
5. p-Dichlorobenzene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
6. 1,2-Dichloroethane	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
7. 1,1-Dichloroethylene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
8. cis-1,2-Dichloroethylene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
9. trans-1,2-Dichloroethylene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
10. Dichloromethane	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
11. 1,2-Dichloropropane	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
12. Ethylbenzene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
13. Styrene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
14. Tetrachloroethylene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
15. Toluene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
16. 1,2,4-Trichlorobenzene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
17. 1,1,1-Trichloroethane	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
18. 1,1,2-Trichloroethane	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
19. Trichloroethylene	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
20. Vinyl chloride	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
21. Xylenes (total)	2	327 IAC 8-2-5.4(a)	3	327 IAC 8-2-5.5
F. Radioactive Contaminants				
1. Beta/photon emitters	2	327 IAC 8-2-10	3	327 IAC 8-2-10.2; 327 IAC 8-2-10.2(b)
2. Alpha emitters	2	327 IAC 8-2-9(2)	3	327 IAC 8-2-10.2; 327 IAC 8-2-10.2(a)
3. Combined radium (226 and 228)	2	327 IAC 8-2-9(1)	3	327 IAC 8-2-10.2; 327 IAC 8-2-10.2(a)
4. Uranium	2	327 IAC 8-2-9(3)	3	327 IAC 8-2-10.2; 327 IAC 8-2-10.2(a)
G. Disinfection Byproducts (DBPs). Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called ~~disinfection byproducts (DBPs)~~ **DBPs. U.S.** EPA sets standards for controlling the levels of DBPs in drinking water.				
1. TTHMs	2	327 IAC 8-2.5-2	3	327 IAC 8-2-5.3, and 327 IAC 8-2.5-10(b)(1) through 327 IAC 8-2.5-10(b)(6), 327 IAC 8-2.5-11 through 327 IAC 8-2.5-20
2. HAA5	2	327 IAC 8-2.5-2	3	327 IAC 8-2.5-6(a), 327 IAC 8-2.5-6(b) and 327 IAC 8-2.5-10(b)(1) through 327 IAC 8-2.5-10(b)(6), 327 IAC 8-2.5-11 through 327 IAC 8-2.5-20
3. Bromate	2	327 IAC 8-2.5-2(a)	3	327 IAC 8-2.5-6(a) and 327 IAC 8-2.5-6(b)
4. Chlorite	2	327 IAC 8-2.5-2(a)	3	327 IAC 8-2.5-6(a) and 327 IAC 8-2.5-6(b)
5. Chlorine (MRDL)	2	327 IAC 8-2.5-3(a)	3	327 IAC 8-2.5-6(a) and 327 IAC 8-2.5-6(c)
6. Chloramine (MRDL)	2	327 IAC 8-2.5-3(a)	3	327 IAC 8-2.5-6(a) and 327 IAC 8-2.5-6(c)

7. Chlorine dioxide (MRDL), where any 2 consecutive daily samples at entrance to distribution system only are above MRDL	2	327 IAC 8-2.5-3(a)	2, 3	327 IAC 8-2.5-6(a); 327 IAC 8-2.5-6(c); and 327 IAC 8-2.5-7(c)(2)
8. Chlorine dioxide (MRDL), where samples in distribution system the next day are also above MRDL	1	327 IAC 8-2.5-3(a)	1	327 IAC 8-2.5-6(a); 327 IAC 8-2.5-6(c); and 327 IAC 8-2.5-7(c)(2)
9. Control of DBP precursors - TOC (TT)	2	327 IAC 8-2.5-9(a) and 327 IAC 8-2.5-9(b)	3	327 IAC 8-2.5-6(a) and 327 IAC 8-2.5-6(d)
10. Benchmarking and disinfection profiling	N/A	N/A	3	327 IAC 8-2.6-2; 327 IAC 8-2.6-2.1
11. Development of monitoring plan	N/A	N/A	3	327 IAC 8-2.5-6(f)
H. Other Treatment Techniques				
1. Acrylamide (TT)	2	327 IAC 8-2-35	N/A	N/A
2. Epichlorohydrin (TT)	2	327 IAC 8-2-35	N/A	N/A
II. Unregulated Contaminant Monitoring:				
A. Nickel	N/A	N/A	3	327 IAC 8-2-4.1(e)
B. Unregulated contaminant monitoring	N/A	N/A	3	40 CFR 141.40*
III. Other Situations Requiring Public Notification:				
A. Fluoride secondary maximum contaminant level (SMCL) exceedance	3	40 CFR 143.3*	N/A	N/A
B. Exceedance of nitrate MCL for ~~noncommunity systems,~~ **a NCWS** as allowed by the commissioner	1	327 IAC 8-2-4(b)	N/A	N/A
C. Availability of unregulated contaminant monitoring data	3	40 CFR 141.40*	N/A	N/A
D. Waterborne disease outbreak	1	327 IAC 8-2-1	N/A	N/A
E. Other waterborne emergency	1	N/A	N/A	N/A
F. Source water sample positive for ~~GWR~~ **ground water rule** fecal indicators: E. coli, enterococci, or coliphage	1	327 IAC 8-2.3-4(g)	N/A	N/A
G. Other situations as determined by the commissioner	1, 2, 3	N/A	N/A	N/A
[1]Until March 31, 2016.				
[2]Beginning April 1, 2016.				
Key:				
MCL = Maximum contaminant level.				
MRDL = Maximum residual disinfectant level.				
TT = Treatment technique.				
Violations of drinking water regulations include violations of MCL, MRDL, TT, monitoring, and testing procedure requirements.				

(b) Drinking water violations and other situations that require public notice according to this rule are contained in the following provisions:

(1) Violations and other situations not listed in Table 16 in subsection (a), such as reporting violations and failure to prepare the consumer confidence report do not require notice, unless otherwise determined by the commissioner. The commissioner may require a more stringent public notice tier, such as:

(A) Tier 1 instead of Tier 2; or

(B) Tier 2 instead of Tier 3;

for specific violations and situations listed in Table 16 in subsection (a).

(2) Failure to test for fecal coliform or E. coli is a Tier 1 violation if testing is not done after any repeat sample tests positive for coliform. All other total coliform monitoring and testing procedure violations are Tier 3.

(3) ~~Systems~~ **A PWS** with **a** treatment technique ~~violations~~ **violation** involving a single exceedance of maximum turbidity limit under the:

(A) surface water treatment rule (SWTR) located at 327 IAC 8-2-8.5 through 327 IAC 8-2-8.8;

(B) interim enhanced surface water treatment rule (IESWTR), located at 327 IAC 8-2.6-1 through 327 IAC 8-2.6-5; or

(C) long term 1 enhanced surface water treatment rule (LT1ESWTR), located at 327 IAC 8-2.6-1 through 327 IAC 8-2.6-5;

~~are~~ **is** required to initiate consultation with the commissioner within twenty-four (24) hours after learning of the violation. Based on this consultation, the commissioner may subsequently decide to elevate the violation to Tier 1. If a ~~system~~ **PWS** is unable to make contact with the commissioner in the twenty-four (24) hour period, the violation is automatically elevated to Tier 1.

(4) Failure to take a confirmation sample within twenty-four (24) hours for nitrate or nitrite after an initial sample exceeds the MCL is a Tier 1 Violation. Other monitoring violations for nitrate are Tier 3.

(5) Failure to monitor for chlorine dioxide at the entrance to the distribution system the day after exceeding the MRDL is a Tier 2 violation.

(6) If any daily sample taken at the entrance to the distribution system exceeds the MRDL for chlorine dioxide and one (1) or more samples taken in the distribution system the next day exceed the MRDL, Tier 1 notification is required. Failure to take the required samples in the distribution system after the MRDL is exceeded at the entry point also triggers Tier 1 notification.

(7) Other waterborne emergencies require a Tier 1 public notice under section 8(a) of this rule for situations that do not meet the definition of a waterborne disease outbreak given in 327 IAC 8-2-1 but still have the potential to have serious adverse effects on health as a result of short term exposure. These waterborne emergencies could include outbreaks not related to treatment deficiencies, as well as situations that have the potential to cause outbreaks, such as any of the following:

(A) Failures or significant interruption in water treatment processes.

(B) Natural disasters that disrupt the water supply or distribution system.

(C) Chemical spills.

(D) Unexpected loading of possible pathogens into the source water.

(8) The commissioner may place other situations in any tier believed appropriate, based on threat to public health.

(9) Failure to collect three (3) or more samples for Cryptosporidium is a Tier 2 violation requiring special notice as specified in ~~327 IAC 8-2.1-18.~~ **section 18 of this rule.**

~~*The Code of Federal Regulations (CFR) citations~~ ***These documents** are incorporated by reference. ~~and are available for copying at~~ **Copies may be obtained from** the **Government Publishing Office, www.gpo.gov, or are available for review at the** Indiana Department of Environmental Management, Office of ~~Water Quality,~~ **Legal Counsel,** 100 North Senate Avenue, ~~Room N1255,~~ **Thirteenth Floor,** Indianapolis, Indiana 46204.

(Water Pollution Control Division; 327 IAC 8-2.1-16; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1115; errata filed Feb 22, 2002, 2:01 p.m.: 25 IR 2254; filed May 1, 2003, 12:00 p.m.: 26 IR 2829; filed Jun 13, 2005, 2:30 p.m.: 28 IR 3236; errata filed Jul 6, 2005, 3:15 p.m.: 28 IR 3583; filed Jul 13, 2007, 11:58 a.m.: 20070808-IR-327060044FRA; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA)

SECTION 16. 327 IAC 8-2.1-17 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.1-17 Drinking water violations; standard health effects language for public notice

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 17. A PWS shall comply with the standard health effects language for public notification contained in the following table:

Table 17. Standard Health Effects Language for Public Notification			
Contaminant	MCLG mg/L	MCL mg/L	Standard Health Effects Language for Public Notification
Drinking Water Regulations:			

A. Microbiological Contaminants, Surface Water Treatment Rule, Interim Enhanced Surface Water Treatment Rule, and Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR)			
1a. Total coliform **bacteria**[10]	0	See footnote[1]	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed, and this was a warning of potential problems.
1a(1). Total coliform bacteria[11]	**N/A**	**See footnote[1]**	**Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct one (1) or more assessments to identify problems and to correct any problems that are found during these assessments.**
1b. Fecal coliform/E. coli [10]	0	0	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
1b(1). E. coli[11]	**0**	**Routine and repeat samples are total coliform-positive and either is E. coli-positive or the PWS fails to take repeat samples following E. coli-positive routine sample or the PWS fails to analyze total coliform-positive**	**E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.**

		repeat samples for E. coli.	
1c. Fecal indicators (enterococci or coliphage)			Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
i. E. coli	0	TT	
ii. Enterococci	None	TT	
iii. Coliphage	None	TT	
1d. Ground Water Rule ~~(GWR)~~ TT violations	None	TT	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.
1e. Coliform assessment or corrective action, or both, violations of 40 CFR 141, Subpart Y* (Revised Total Coliform Rule (RTCR))[11]	**N/A**	**TT**	**Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that are found.** **[THE SYSTEM IS REQUIRED TO USE THE FOLLOWING APPLICABLE SENTENCES:]** **We failed to conduct the required assessment.** **We failed to correct all identified sanitary defects that were found during the assessment or assessments.**
1f. E. coli assessment or corrective action, or both, violations of 40 CFR 141, Subpart Y* (RTCR)[11]	**N/A**	**TT**	**E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for E.**

			coli indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found. **[THE SYSTEM IS REQUIRED TO USE THE FOLLOWING APPLICABLE SENTENCES:]** **We failed to conduct the required assessment.** **We failed to correct all identified sanitary defects that were found during the assessment that we conducted.**
1g. E. coli[11]	**0**	**See footnote[12]**	**E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.**
1h. Seasonal system TT violations of 40 CFR 141, Subpart Y* (RTCR)[11]	**N/A**	**TT**	**The failure to monitor for total coliforms or E. coli prior to serving water to the public requires the use of mandatory language found in section 11(c)(2) of this rule. Failure to complete actions other than monitoring for total coliforms or E. coli prior to serving water to the public requires the use of mandatory language found in section 11(a) of this rule.**
2a. Turbidity (MCL)[2]	None	1 NTU/5 NTU	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms, such as nausea, cramps, diarrhea, and associated headaches.
2b. Turbidity (SWTR TT, IESWTR TT, and LT1ESWTR TT)[2]	None	TT	Turbidity has no health effects. However, turbidity can interfere with disinfection and

			provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms, such as nausea, cramps, diarrhea, and associated headaches.
2c. Giardia lamblia	0	TT[4]	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms, such as nausea, cramps, diarrhea, and associated headaches.
2d. Viruses			
2e. Heterotrophic plate county (HPC) bacteria[3]			
2f. Legionella			
2g. Cryptosporidium			
B. Inorganic Chemicals (IOCs)			
3. Antimony	0.006	0.006	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
4. Arsenic[5]	0	0.01	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer.
5. Asbestos (>10 µm)	7 MFL	7 MFL	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
6. Barium	2	2	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
7. Beryllium	0.004	0.004	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
8. Cadmium	0.005	0.005	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
9. Chromium (total)	0.1	0.1	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
10. Cyanide	0.2	0.2	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
11. Fluoride	4.0	4.0	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine (9) years of age. Mottling, also known as dental fluorosis, may include brown staining or pitting of the teeth, or both, and occurs only in developing teeth before they erupt from the gums.
12. Mercury (inorganic)	0.002	0.002	Some people who drink water containing

			inorganic mercury well in excess of the MCL over many years could experience kidney damage.
13. Nitrate	10	10	Infants below six (6) months of age who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
14. Nitrite	1	1	Infants below six (6) months of age who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
15. Total nitrate and nitrite	10	10	Infants below six (6) months of age who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
16. Selenium	0.05	0.05	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
17. Thallium	0.0005	0.002	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
C. Lead and Copper Rule			
18. Lead	0	TT	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
19. Copper	1.3	TT	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
D. Synthetic Organic Chemicals (SOCs)			
20. 2,4-D	0.07	0.07	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
21. 2,4,5-TP (silvex)	0.05	0.05	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
22. Alachlor	0	0.002	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
23. Atrazine	0.003	0.003	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive

			difficulties.
24. Benzo(a)pyrene (PAHs)	0	0.0002	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
25. Carbofuran	0.04	0.04	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood or nervous or reproductive systems.
26. Chlordane	0	0.002	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system and may have an increased risk of getting cancer.
27. Dalapon	0.2	0.2	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
28. Di (2-ethylhexyl) adipate	0.4	0.4	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.
29. Di (2-ethylhexyl) phthalate	0	0.006	Some people who drink water containing di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
30. Dibromochloropropane (DBCP)	0	0.0002	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
31. Dinoseb	0.007	0.007	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
32. Dioxin (2,3,7,8-TCDD)	0	3×10^{-8}	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
33. Diquat	0.02	0.02	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
34. Endothall	0.1	0.1	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
35. Endrin	0.002	0.002	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
36. Ethylene dibromide	0	0.00005	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys and may have an increased risk of getting cancer.
37. Glyphosate	0.7	0.7	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
38. Heptachlor	0	0.0004	Some people who drink water containing

			heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
39. Heptachlor epoxide	0	0.0002	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
40. Hexachlorobenzene	0	0.001	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
41. Hexachlorocyclo-pentadiene	0.05	0.05	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
42. Lindane	0.0002	0.0002	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
43. Methoxychlor	0.04	0.04	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
44. Oxamyl (vydate)	0.2	0.2	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
45. Pentachlorophenol	0	0.001	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys and may have an increased risk of getting cancer.
46. Picloram	0.5	0.5	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
47. Polychlorinated biphenyls (PCBs)	0	0.0005	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties and may have an increased risk of getting cancer.
48. Simazine	0.004	0.004	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
49. Toxaphene	0	0.003	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid and may have an increased risk of getting cancer.
E. Volatile Organic Chemicals (VOCs)			
50. Benzene	0	0.005	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets and may have an increased risk of getting cancer.
51. Carbon tetrachloride	0	0.005	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
52. Chlorobenzene	0.1	0.1	Some people who drink water containing

(monochlorobenzene)			chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
53. o-Dichlorobenzene	0.6	0.6	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
54. p-Dichlorobenzene	0.075	0.075	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen or changes in their blood.
55. 1,2-Dichloroethane	0	0.005	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
56. 1,1-Dichloroethylene	0.007	0.007	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
57. cis-1,2-Dichloroethylene	0.07	0.07	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
58. trans-1,2-Dichloroethylene	0.1	0.1	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
59. Dichloromethane	0	0.005	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
60. 1,2-Dichloropropane	0	0.005	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
61. Ethylbenzene	0.7	0.7	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
62. Styrene	0.1	0.1	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
63. Tetrachloroethylene	0	0.005	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver and may have an increased risk of getting cancer.
64. Toluene	1	1	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
65. 1,2,4-Trichlorobenzene	0.07	0.07	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
66. 1,1,1-Trichloroethane	0.2	0.2	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
67. 1,1,2-Trichloroethane	0.003	0.005	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.

68. Trichloroethylene	0	0.005	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
69. Vinyl chloride	0	0.002	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
70. Xylenes (total)	10	10	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
F. Radioactive Contaminants			
71. Beta/photon emitters	0	4 mrem/yr	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.
72. Alpha emitters	0	15 pCi/l	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
73. Combined radium (226 and 228)	0	5 pCi/l	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
74. Uranium	0	30 µg/l	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
G. Disinfection Byproducts (DBPs): Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called ~~disinfection byproducts (DBPs).~~ **DBPs. U.S.** EPA sets standards for controlling the levels of disinfectants and DBPs in drinking water including THMs and ~~haloacetic acids (HAAs)~~[8]. **HAA5[8].**			
75. TTHMs	N/A	0.080[6, 9]	Some people who drink water containing THMs in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.
76. ~~Haloacetic acids~~ HAA5	N/A	0.060[7]	Some people who drink water containing ~~haloacetic acids~~ **HAA5** in excess of the MCL over many years may have an increased risk of getting cancer.
77. Bromate	0	0.010	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
78. Chlorite	0.08	1.0	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
79. Chlorine	4 MRDLG	4.0 MRDL	Some people who use drinking water containing chlorine well in excess of the

			MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
80. Chloramines	4 MRDLG	4.0 MRDL	Some people who use drinking water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
81a. Chlorine dioxide, where any two consecutive daily samples taken at the entrance to the distribution system are above the MRDL	0.8 MRDLG	0.8 MRDL	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. Add for public notification only: The chlorine dioxide violations reported today are the result of exceedances at the treatment facility only, not within the distribution system that delivers water to consumers. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to consumers.
81b. Chlorine dioxide, where one or more distribution system samples are above the MRDL	0.8 MRDLG	0.8 MRDL	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. Add for public notification only: The chlorine dioxide violations reported today include exceedances of the **U.S.** EPA standard within the distribution system that delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure.
82. Control of DBP precursors (TOC)	None	TT	TOC has no health effects. However, TOC provides a medium for the formation of ~~disinfection byproducts.~~ **DBPs.** These byproducts include THMs and ~~haloacetic acids (HAAs).~~ **HAA5.** Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects and may lead to an increased risk of getting cancer.
H. Other Treatment Techniques			
83. Acrylamide	0	TT	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood and may have an increased risk of getting cancer.
84. Epichlorohydrin	0	TT	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems and may have an increased risk of getting cancer.
Key:			
MCLG - Maximum contaminant level goal.			

MCL - Maximum contaminant level.
MRDL = Maximum residual disinfectant level.
MRDLG = Maximum residual disinfectant level goal.
NTU - Nephelometric turbidity unit.
TT - Treatment technique.
MFL - Millions of fiber per liter.
Action Level (Lead) = 0.015 mg/L.
Action Level (Copper) = 1.3 mg/L.
mrem - millirems per year.
pCi/L - picocuries per liter.

[1]For ~~water systems~~ **a PWS** analyzing at least forty (40) samples per month, ~~no~~ **not** more than five percent (5.0%) of the monthly samples may be positive for total coliforms. For ~~systems~~ **a PWS** analyzing fewer than forty (40) samples per month, ~~no~~ **not** more than one (1) sample per month may be positive for total coliforms.

[2]There are various regulations that set turbidity standards for different types of ~~systems,~~ **PWSs,** including the 1989 Surface Water Treatment Rule, the 1998 Interim Enhanced Surface Water Treatment Rule, and the 2001 Long Term 1 Enhanced Surface Water Treatment Rule. The following apply:

(1) ~~Systems~~ **A PWS** subject to 327 IAC 8-2-8.5 through 327 IAC 8-2-8.8 (also known as the Surface Water Treatment Rule (SWTR)) ~~for both filtered and unfiltered systems,~~ may not exceed five (5) NTU. In addition, in **a** filtered ~~systems,~~ **PWS,** ninety-five percent (95%) of samples each month must not exceed five-tenths (0.5) NTU in ~~systems~~ **a PWS** using conventional or direct filtration and must not exceed one (1) NTU in ~~systems~~ **a PWS** using slow sand or diatomaceous earth filtration or other filtration technologies approved by the commissioner.

(2) For ~~systems~~ **a PWS** subject to 327 IAC 8-2.6-1, 327 IAC 8-2.6-2, 327 IAC 8-2.6-3, 327 IAC 8-2.6-4, and 327 IAC 8-2.6-5 (also known as the Interim Enhanced Surface Water Treatment Rule (IESWTR)) ~~for systems~~ serving at least ten thousand (10,000) individuals using surface water or ground water under the direct influence of surface water that ~~use~~ **uses** conventional filtration or direct filtration, after January 1, 2002, the turbidity level of ~~a system's~~ **the PWS's** combined filter effluent may not exceed three-tenths (0.3) NTU in at least ninety-five percent (95%) of monthly measurements, and the turbidity level of ~~a system's~~ **the PWS's** combined filter effluent must not exceed one (1) NTU at any time.

(3) ~~Systems~~ **For a PWS** subject to 327 IAC 8-2.6-1, 327 IAC 8-2.6-2, 327 IAC 8-2.6-3, 327 IAC 8-2.6-4, and 327 IAC 8-2.6-5, the IESWTR, using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the commissioner.

(4) For ~~systems~~ **a PWS** subject to 327 IAC 8-2.6-1 through 327 IAC 8-2.6-5 (also known as the Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR)) ~~for systems~~ serving fewer than ten thousand (10,000) individuals using surface water or ground water under the direct influence of surface water that ~~use~~ **uses** conventional filtration or direct filtration, after January 1, 2005, the turbidity level of ~~a system's~~ **the PWS's** combined filter effluent may not exceed three-tenths (0.3) NTU in at least ninety-five percent (95%) of monthly measurements, and the turbidity level of ~~a system's~~ **the PWS's** combined filter effluent must not exceed one (1) NTU at any time.

(5) ~~Systems~~ **For a PWS** subject to 327 IAC 8-2.6-1 through 327 IAC 8-2.6-5, the LT1ESWTR, using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the commissioner.

[3]The bacteria detected by heterotrophic plate count (HPC) are not necessarily harmful. HPC is simply an alternative method of determining disinfectant residual levels. The number of ~~such~~ bacteria **detected by HPC** is an indicator of whether there is enough disinfectant in the distribution system.

[4]SWTR, IESWTR, and LT1ESWTR treatment technique violations that involve turbidity exceedances may use the health effects language for turbidity instead.

[5]The arsenic MCL and MCLG are effective January 1, 2006. Until then, the MCL is 0.05 mg/L and there is no MCLG.

[6]The MCL for TTHM is the sum of the concentrations of the individual THMs.

[7]The MCL for ~~haloacetic acids~~ **HAA5** is the sum of the concentrations of the individual haloacetic acids.

[8]**A PWS using** surface water ~~systems~~ and **a PWS using** ground water ~~systems~~ under the direct influence of surface water are regulated under 327 IAC 8-2-8.5, 327 IAC 8-2-8.6, 327 IAC 8-2-8.7, 327 IAC 8-2-8.8, and 327 IAC 8-2-14. **A** Subpart H ~~community~~ **system, including those that are CWSs** and ~~nontransient noncommunity~~

~~systems~~ **NTNCWSs,** serving greater than or equal to ten thousand (10,000) persons shall comply with 327 IAC 8-2.5-1 through 327 IAC 8-2.5-9 DBP MCLs and MRDLs beginning January 1, 2002. All other ~~community~~ **CWSs** and ~~nontransient noncommunity systems~~ **NTNCWSs** shall comply with Subpart L DBP MCLs and disinfectant MRDLs beginning January 1, 2004. Subpart H transient noncommunity systems serving greater than or equal to ten thousand (10,000) persons that use chlorine dioxide as a disinfectant or oxidant shall comply with the chlorine dioxide MRDL beginning January 1, 2002. All other ~~transient noncommunity systems~~ **TWSs** that use chlorine dioxide as a disinfectant or oxidant shall comply with the chlorine dioxide MRDL beginning January 1, 2004.
[9]~~Community~~ **[9]CWSs** and ~~nontransient noncommunity systems~~ **NTNCWSs** shall comply with 327 IAC 8-2.5-11 through 327 IAC 8-2.5-20 TTHM and HAA5 MCLs of eighty-thousandths (0.080) milligrams per liter and sixty-thousandths (0.060) milligrams per liter respectively (with compliance calculated as a LRAA) on the schedule in 327 IAC 8-2.5-11.
[10]Until March 31, 2016.
[11]Beginning April 1, 2016.
[12]A PWS is in compliance unless one (1) of the following conditions occurs: **(1) An E. coli-positive repeat sample following a total coliform-positive routine sample.** **(2) A total coliform-positive repeat sample following an E. coli-positive routine sample.** **(3) Failure to take all required repeat samples following an E. coli-positive routine sample.** **(4) Failure to test for E. coli when any repeat sample tests positive for total coliform.**

***This document is incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Thirteenth Floor, Indianapolis, Indiana 46204.**

(Water Pollution Control Division; 327 IAC 8-2.1-17; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1118; errata filed Feb 22, 2002, 2:01 p.m.: 25 IR 2254; filed May 1, 2003, 12:00 p.m.: 26 IR 2833; filed Jun 13, 2005, 2:30 p.m.: 28 IR 3240; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA)

SECTION 17. 327 IAC 8-2.3-4 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.3-4 Ground water source microbial monitoring and analytical methods

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 4. (a) The following applies to triggered source water monitoring required under this rule:
(1) A **PWS using** ground water ~~system~~ shall conduct triggered source water monitoring if the conditions identified in the following exist:
(A) The ~~system~~ **PWS using ground water** does not provide at least 4-log treatment of viruses using:
(i) inactivation;
(ii) removal; or
(iii) a combination of 4-log virus inactivation and removal approved by the commissioner;
before or at the first customer for each ground water source.
(B) One (1) of the following conditions occurs:
~~(B)~~ **(i) Until March 31, 2016,** the ~~system~~ **PWS using ground water** is notified that:
~~(i)~~ **(AA)** a sample collected under 327 IAC 8-2-8(a) through 327 IAC 8-2-8(e) is total coliform-positive; and
~~(ii)~~ **(BB)** the sample under ~~item (i)~~ **subitem (AA)** is not invalidated under 327 IAC 8-2-8(f).
(ii) Beginning April 1, 2016, the PWS using ground water is notified that:
(AA) a sample collected under 40 CFR 141.854 through 40 CFR 141.857* is total coliform-positive; and
(BB) the sample under item (i) is not invalidated under 40 CFR 141.853(c)*.
(2) A **PWS using** ground water ~~system~~ shall collect, within twenty-four (24) hours of notification of the total coliform-positive sample under subdivision (1)(B)(i), at least one (1) ground water source sample from each ground water source in use at the time the total coliform-positive sample was collected under 327 IAC 8-2-8(a)

through 327 IAC 8-2-8(e) **until March 31, 2016, or collected under 40 CFR 141.854 through 40 CFR 141.857, beginning April 1, 2016,** except as provided in clause (B). The commissioner may approve the following alternatives to this sampling requirement:

(A) The commissioner may extend the twenty-four (24) hour time limit on a case-by-case basis if the ~~system~~ **PWS using ground water** cannot collect the ground water source water sample within twenty-four (24) hours due to circumstances beyond its control. In the case of an extension, the commissioner shall specify how much time the ~~system~~ **PWS using ground water** has to collect the sample.

(B) If:

(i) approved by the commissioner, ~~systems~~ **a PWS using ground water** with more than one (1) ground water source may meet the requirements of this subdivision by sampling a representative ground water source or sources; and

(ii) directed by the commissioner, a ~~system~~ **PWS using ground water** shall submit for commissioner approval a triggered source water monitoring plan that:

(AA) identifies one (1) or more ground water sources that are representative of each monitoring site in the ~~system's~~ **PWS using ground water's** sample siting plan under 327 IAC 8-2-8(a) through 327 IAC 8-2-8(e) **until March 31, 2016, or under 40 CFR 141.854 through 40 CFR 141.857* beginning April 1, 2016;** and

(BB) the ~~system~~ **PWS using ground water** intends to use for representative sampling under this subdivision.

(C) **Until March 31, 2016,** a ~~ground water system~~ **PWS using ground water** that uses a single well and serves one thousand (1,000) people or fewer may use a repeat sample collected from a ground water source to:

(i) meet the requirements of 327 IAC 8-2-8.1; and

(ii) satisfy the monitoring requirements of this subdivision;

for ~~only~~ that ground water source **only** if the commissioner approves the use of E. coli as a fecal indicator for source water monitoring under this subsection and the commissioner approves the use of the source water sample to meet the requirements of 327 IAC 8-2-8.1. If the repeat sample collected from the ground water source is E. coli positive, the ~~system~~ **PWS using ground water** shall comply with subdivision (3).

(D) Beginning April 1, 2016, a PWS using ground water serving one thousand (1,000) or fewer people may use a repeat sample collected from a ground water source to:

(i) meet the requirements of 40 CFR 141, Subpart Y*; and

(ii) satisfy the monitoring requirements of this subdivision;

for that ground water source only if the commissioner approves the use of E. coli as a fecal indicator for source water monitoring under this subsection and the commissioner approves the use of a single sample for meeting both the triggered source water monitoring requirements in this subsection and the repeat monitoring requirements in 40 CFR 141.858*. If the repeat sample collected from the ground water source is E. coli-positive, the PWS using ground water shall comply with subdivision (3).

(3) If the commissioner does not require corrective action under section 5(a)(2) of this rule for a fecal indicator-positive source water sample:

(A) collected under subdivision (2); and

(B) that is not invalidated under subsection (d);

then the ~~system~~ **PWS using ground water** shall collect five (5) additional source water samples from the same source within twenty-four (24) hours of being notified of the fecal indicator-positive sample.

(4) Consecutive and wholesale systems **using ground water** shall meet the following requirements:

(A) In addition to the other requirements of this subsection, a consecutive ~~ground water~~ system **using ground water** that has a total coliform-positive sample collected under 327 IAC 8-2-8(a) through 327 IAC 8-2-8(e) **until March 31, 2016, or under 40 CFR 141.854 through 40 CFR 141.857* beginning April 1, 2016,** shall notify ~~the~~ **each** wholesale system or systems **using ground water** that ~~supply~~ **supplies** water to the consecutive system within twenty-four (24) hours of being notified of the total coliform-positive sample.

(B) In addition to the other requirements of this subsection, a wholesale ~~ground water~~ system **using ground water** shall do the following:

(i) A wholesale ~~ground water~~ system **using ground water** that receives notice from a consecutive system ~~it~~ **using ground water that the wholesale system using ground water** serves that a sample collected under 327 IAC 8-2-8(a) through 327 IAC 8-2-8(e) **until March 31, 2016, or under 40 CFR 141.854 through 40 CFR 141.857* beginning April 1, 2016,** is total coliform-positive shall, within twenty-four (24) hours of being notified, do the following:

(AA) Collect a sample from its ground water source or sources under subdivision (2).

(BB) Analyze it for a fecal indicator under subsection (c).

(ii) If the sample collected under item (i) is fecal indicator-positive, the wholesale ~~ground water~~ system **using ground water** shall:

(AA) notify all consecutive systems **using ground water** served by that ground water source of the fecal indicator-positive source water sample result within twenty-four (24) hours of being notified of the ground water source sample monitoring result; and

(BB) meet the requirements of subdivision (3).

(C) Consecutive and wholesale systems **using ground water** shall work together to ensure that the requirements of this subdivision are met.

(5) A **PWS using** ground water ~~system~~ is not required to comply with the source water monitoring requirements of this subsection if either of the following conditions exists:

(A) The commissioner determines and documents, in writing, that the total coliform-positive sample collected under **either of the following is caused by a distribution system deficiency:**

(i) 327 IAC 8-2-8(a) through 327 IAC 8-2-8(e) ~~is caused by a distribution system deficiency.~~ **until March 31, 2016.**

(ii) 40 CFR 141.854 through 40 CFR 141.857* beginning April 1, 2016.

(B) The total coliform-positive sample collected under **either of the following is collected at a location that meets criteria set by the commissioner for distribution system conditions that will cause total coliform-positive samples:**

(i) 327 IAC 8-2-8(a) through 327 IAC 8-2-8(e) ~~is collected at a location that meets criteria set by the commissioner for distribution system conditions that will cause total coliform-positive samples.~~ **until March 31, 2016.**

(ii) 40 CFR 141.854 through 40 CFR 141.857* beginning April 1, 2016.

(b) If directed by the commissioner, a **PWS using** ground water ~~system~~ shall conduct assessment source water monitoring that meets the following:

(1) The ~~requirements~~ **commissioner** shall ~~be determined by~~ **determine** the ~~commissioner~~ **requirements** for assessment source water monitoring.

(2) A **PWS using** ground water ~~system~~ conducting assessment source water monitoring may use a triggered source water sample collected under subsection (a)(2) to meet the requirements of this subsection.

(3) Assessment source water monitoring requirements determined by the commissioner may include the following:

(A) Collection of at least:

(i) one (1) ground water source sample per month; or

(ii) if operating fewer than twelve (12) months, twelve (12) samples split evenly through the period of operation representing each month the ~~system~~ **PWS using ground water** provides ground water to the public.

(B) Collection of samples from each well unless the ~~system~~ **PWS using ground water** obtains written approval from the commissioner to conduct monitoring at one (1) or more wells within the **PWS using** ground water ~~system~~ that:

(i) are representative of multiple wells used by that ~~system;~~ **PWS using ground water;** and

(ii) draw water from the same hydrogeologic setting.

(C) Collection of a standard sample volume of at least one hundred (100) milliliters for fecal indicator analysis regardless of the fecal indicator or analytical method used.

(D) Analysis of all ground water source samples using one (1) of the analytical methods listed in subsection (c)(2) for the presence of:

(i) E. coli;

(ii) enterococci; or

(iii) coliphage.

(E) Collection of ground water source samples at a location prior to any treatment of the ground water source unless the commissioner approves a sampling location after treatment.

(F) Collection of ground water source samples at the well unless the:

(i) ~~system's~~ **PWS using ground water's** configuration does not allow for sampling at the well; and

(ii) commissioner approves an alternate sampling location that is representative of the water quality of that well.

(c) The following analytical methods and requirements apply under this rule:

(1) A **PWS using** ground water ~~system~~ subject to the triggered source water monitoring requirements of subsection (a) shall collect a standard sample volume of at least one hundred (100) milliliters for fecal indicator analysis regardless of the fecal indicator or analytical method used.

(2) A **PWS using** ground water ~~system~~ shall analyze all ground water source samples collected under subsection (a) using one (1) of the analytical methods listed in the following table or with the alternative methods listed in Appendix A to Subpart C of 40 CFR 141 for the presence of E. coli, enterococci, or

coliphage:

Analytical Methods for Source Water Monitoring		
Fecal indicator[1]	Methodology	Method Citation*
E. coli	Colilert[2]	9223 B
	Colisure[2]	9223 B
	Membrane Filter Method with MI Agar m-ColiBlue24 Test E*Colite Test	EPA Method 1604
	EC-MUG[3]	9221 F
	NA-MUG[3]	9222 G
Enterococci	Multiple Tube Technique Membrane Filter Technique Membrane Filter Technique Enterolert	9230 B 9230 C EPA Method 1600
Coliphage	Two-Step Enrichment Presence-Absence Procedure Single Agar Layer Procedure	EPA Method 1601 EPA Method 1602

[1]The time from sample collection to initiation of analysis may not exceed thirty (30) hours. The **PWS using** ground water ~~system~~ is encouraged, but is not required, to hold samples below ten (10) degrees Centigrade during transit.

[2]Medium is available through IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, ME 04092.

[3]EC-MUG (Method 9221F) or NA-MUG (Method 9222G) can be used for E. coli testing step as described in 327 IAC 8-2-8.4(a)(5)(A) or 327 IAC 8-2-8.4(a)(5)(B) after use of Standard Methods 9221 B, 9221 D, 9222 B, or 9222 C.

(d) The commissioner may invalidate a fecal indicator-positive ground water source sample collected under subsection (a) if one (1) of the following occurs:

(1) The ~~system~~ **PWS using ground water** provides the commissioner with written notice from the laboratory that improper sample analysis occurred.

(2) The commissioner determines and documents in writing that there is substantial evidence that a fecal indicator-positive ground water source sample is not related to source water quality.

(e) Any ground water source sample required under subsection (a) must be collected at:

(1) a location prior to any treatment of the ground water source or after treatment only if that sampling location is approved by the commissioner; and

(2) the well unless the:

(A) ~~system's~~ **PWS using ground water's** configuration does not allow for sampling at the well; and

(B) commissioner approves an alternate sampling location that:

(i) meets the requirements of subsection (a); and

(ii) is representative of the water quality of that well.

(f) If directed by the commissioner, a **PWS using** ground water ~~system~~ that places a new ground water source into service after November 30, 2009, shall:

(1) conduct assessment source water monitoring under subsection (b); and

(2) begin monitoring before the ground water source is used to provide water to the public.

(g) A **PWS using** ground water ~~system~~ with a ground water source sample collected under subsection (a) or (b) that is:

(1) fecal indicator-positive; and

(2) not invalidated under subsection (d);

including consecutive systems **using ground water** served by the ground water source, shall conduct public notification under 327 IAC 8-2.1-8.

(h) Failure to meet the requirements of subsections (a) through (f):

(1) is a monitoring violation; and
(2) requires the **PWS using** ground water system to provide public notification under 327 IAC 8-2.1-10.

*The methods referenced in this section are incorporated by reference and can be obtained as follows:
(1) Methods 9221 F, 9222 G, 9223 B, 9230 B, and 9230 C are described in Standard Methods for the Examination of Water and Wastewater 20th Edition (1998), and copies can be obtained from the American Public Health Association, 1015 Fifteenth Street, Washington, D.C. 20005-2605.
(2) EPA Method 1604: Total Coliforms and Escherichia coli in Water by Membrane Filtration Using a Simultaneous Detection Technique (MI Medium); September 2002, EPA 821-R-02-024. Method is available at http://www.epa.gov/nerlcwww/1604so02.pdf or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue NW, Washington, D.C. 20005-2605.
(3) A description of the m-ColiBlue24 Test, "Total Coliforms and E. coli Membrane Filtration Method with m-ColiBlue24 Broth", Method No. 10029 Revision 2, August 17, 1999, is available from Hach Company, 100 Dayton Avenue, Ames, IA 50010 or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue NW, Washington, D.C. 20460.
(4) A description of the E*Colite Test, "Charm E*Colite Presence/Absence Test for Detection and Identification of Coliform Bacteria and Escherichia coli in Drinking Water", January 9, 1998, is available from Charm Sciences, Inc., 659 Andover Street, Lawrence, MA 01843-1032 or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue NW, Washington, D.C. 20460.
(5) EPA Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl-b-D-Glucoside Agar (mEI) EPA 821-R-02-022 (September 2002) is an approved variation of Standard Method 9230C. The method is available at http://www.epa.gov/nerlcwww/1600sp02.pdf or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue NW, Washington, D.C. 20460. The holding time and temperature for ground water samples are specified in footnote 1 above, rather than as specified in Section 8 of EPA Method 1600.
(6) EPA Method 1601: Male-specific (F+) and Somatic Coliphage in Water by Two-step Enrichment Procedure; April 2001, EPA 821-R-01-030. Method is available at http://www.epa.gov/nerlcwww/1601ap01.pdf or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue NW, Washington, D.C. 20460.
(7) EPA Method 1602: Male-specific (F+) and Somatic Coliphage in Water by Single Agar Layer (SAL) Procedure; April 2001, EPA 821-R-01-029. Method is available at http://www.epa.gov/nerlcwww/1602ap01.pdf or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue NW, Washington, D.C. 20460.
The methods are also available for ~~copying~~ **review** at the Indiana Department of Environmental Management, Office of ~~Water Quality,~~ **Legal Counsel,** Indiana Government Center North, 100 North Senate Avenue, Room ~~N1255,~~ **Thirteenth Floor,** Indianapolis, Indiana 46204.

(Water Pollution Control Division; 327 IAC 8-2.3-4; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA; errata filed Jul 2, 2010, 1:12 p.m.: 20100714-IR-327100432ACA; filed Feb 25, 2013, 8:36 a.m.: 20130327-IR-327110667FRA)

SECTION 18. 327 IAC 8-2.3-7 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.3-7 Reporting and record keeping for ground water systems

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 7. (a) In addition to the requirements of 327 IAC 8-2-13, a **PWS using** ground water ~~system~~ regulated under this rule shall provide the following information to the commissioner:
(1) A **PWS using** ground water ~~system~~ conducting compliance monitoring under section 5(b) of this rule shall notify the commissioner under the following circumstances:
(A) Any time the ~~system~~ **PWS using ground water** fails to meet any of the following requirements specified by the commissioner:
(i) Minimum residual disinfectant concentration.
(ii) Membrane operating criteria or membrane integrity.
(iii) Alternative treatment operating criteria.
(B) Within a time period according to the following:
(i) Notify the commissioner within four (4) hours of a failure to meet any commissioner-specified requirement under clause (A) if operation in accordance with the criteria or requirements is not restored.
(ii) The **PWS using** ground water ~~system~~ shall notify the commissioner as soon as possible, but in no case later than the end of the next business day.

(2) After completing any corrective action under section 5(a) of this rule, a **PWS using** ground water ~~system~~ shall notify the commissioner within thirty (30) days of completion of the corrective action.
(3) If a **PWS using** ground water ~~system~~ subject to the requirements of section 4(a) of this rule does not conduct source water monitoring under section 4(a)(5)(B) of this rule, the ~~system~~ **PWS using ground water** shall provide documentation to the commissioner within thirty (30) days of the total coliform positive sample that it met the criteria set by the commissioner.

(b) In addition to the requirements of 327 IAC 8-2-20, a **PWS using** ground water ~~system~~ regulated under this rule shall maintain the following information in its records:
(1) Documentation of corrective actions must be kept for a period of not less than ten (10) years.
(2) Documentation of notice to the public as required under section 5(a)(7) of this rule must be kept for a period of not less than three (3) years.
(3) Records of decisions under section 4(a)(5)(B) of this rule and records of invalidation of fecal indicator-positive ground water source samples under section 4(d) of this rule must be kept for a period of not less than five (5) years.
(4) For consecutive systems **using ground water,** documentation of notification to ~~the~~ **each** wholesale system or systems **using ground water** of total-coliform positive samples that are not invalidated under:
(A) 327 IAC 8-2-8(f) **until March 31, 2016; or**
(B) 40 CFR 141.853 (c)* beginning April 1, 2016;
must be kept for a period of not less than five (5) years.
(5) For ~~systems,~~ **PWSs using ground water,** including wholesale systems **using ground water,** that are required to perform compliance monitoring under section 5(b) of this rule, records of the following must be maintained:
(A) The minimum disinfectant residual specified by the commissioner must be kept for a period of not less than ten (10) years.
(B) The lowest daily residual disinfectant concentration must be kept for a period of not less than five (5) years, including the:
(i) date; and
(ii) duration;
of any failure to maintain the minimum residual disinfectant concentration for a period of more than four (4) hours as prescribed by the commissioner.
(C) Commissioner-specified compliance requirements for membrane filtration and of parameters specified by the commissioner for commissioner-approved alternative treatment must be kept for a period of not less than five (5) years, including the:
(i) date; and
(ii) duration;
of any failure to meet the membrane operating, membrane integrity, or alternative treatment operating requirements for more than four (4) hours.

***This document is incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Thirteenth Floor, Indianapolis, Indiana 46204.**

(Water Pollution Control Division; 327 IAC 8-2.3-7; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA)

SECTION 19. 327 IAC 8-2.4 IS ADDED TO READ AS FOLLOWS:

Rule 2.4 Revised Total Coliform Rule

327 IAC 8-2.4-1 Revised total coliform rule incorporated by reference

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-18-2; IC 13-18-16

Sec. 1. (a) A reference to a provision of the Code of Federal Regulations (CFR) means the July 1, 2015, edition.

(b) 40 CFR 141, Subpart Y* is incorporated by reference.

(c) If a requirement incorporated by reference in subsection (b) conflicts with or is inconsistent with a requirement in 327 IAC 8-2, 327 IAC 8-2.1, 327 IAC 8-2.3, or 327 IAC 8-2.5, then the requirement incorporated by reference in subsection (b) applies.

(d) When used in 40 CFR 141, Subpart Y, as incorporated by reference under this rule, the following definitions apply:

(1) "Clean compliance history" means a record of none of the following:

(A) MCL violations under 327 IAC 8-2-7 and this rule.

(B) Monitoring violations under 327 IAC 8-2-8.3, 327 IAC 8-2-8.4, and this rule.

(C) Coliform treatment technique trigger exceedances or treatment technique violations under this rule.

(2) "Level 1 assessment" means an evaluation conducted by the PWS operator or owner to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and, when possible, the likely reason that the PWS triggered the assessment. Minimum elements include the following:

(A) Review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired.

(B) Changes in distribution system maintenance and operation that could affect distributed water quality, including water storage.

(C) Source and treatment considerations that, where appropriate, bear on distributed water quality, for example, whether a PWS using ground water is disinfected.

(D) Existing water quality monitoring data.

(E) Inadequacies in the following:

(i) Sample sites.

(ii) Sampling protocol.

(iii) Sample processing.

The PWS must conduct the assessment consistent with any directives from the commissioner that tailor specific assessment elements with respect to the size and type of the PWS and size, type, and characteristics of the distribution system.

(3) "Level 2 assessment" means an evaluation conducted by an individual approved by the commissioner, which may include the PWS operator, to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and, when possible, the likely reason that the PWS triggered the assessment. A level 2 assessment provides a more detailed examination of the PWS, including the PWS's monitoring and operational practices, than does a level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. Minimum elements include the following:

(A) Review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired.

(B) Changes in distribution system maintenance and operation that could affect distributed water quality, including water storage.

(C) Source and treatment considerations that, where appropriate, bear on distributed water quality, for example, whether a PWS using ground water is disinfected.

(D) Existing water quality monitoring data.

(E) Inadequacies in the following:

(i) Sample sites.

(ii) Sampling protocol.

(iii) Sample processing.

The PWS must conduct the assessment consistent with any directives from the commissioner that tailor specific assessment elements with respect to the size, type, and characteristics of the distribution system. The PWS must comply with any expedited actions or additional actions required by the commissioner in the case of an E. coli MCL violation.

(4) "Primacy agency" means the department of environmental management where the department exercises primary enforcement responsibility as granted by the United States Environmental Protection Agency.

(5) "Sanitary defect" means a defect that:

(A) could provide a pathway of entry for microbial contamination into the distribution system; or

(B) is indicative of:

(i) a failure; or

(ii) an imminent failure;
in a barrier that is already in place.
(6) "Seasonal system" is a NCWS that:
(A) is not operated as a PWS on a year-round basis; and
(B) starts up and shuts down at the beginning and end of each operating season.

***These documents are incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.**

(Water Pollution Control Division; 327 IAC 8-2.4-1)

SECTION 20. 327 IAC 8-2.5-6 IS AMENDED TO READ AS FOLLOWS:

327 IAC 8-2.5-6 Monitoring requirements; disinfectant residuals, disinfection byproducts, and disinfection byproducts precursors

Authority: IC 13-13-5; IC 13-14-8-2; IC 13-14-8-7; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-16-8; IC 13-18-16-9
Affected: IC 13-13-5-2; IC 13-18-2; IC 13-18-11; IC 13-18-16

Sec. 6. (a) General monitoring requirements for disinfectant residuals, disinfection byproducts, and disinfection byproducts precursors are as follows:
(1) ~~Systems~~ **A PWS** shall take all samples during normal operating conditions.
(2) ~~Systems~~ **A PWS** may consider multiple wells drawing water from a single aquifer as one (1) treatment plant for determining the minimum number of TTHM and HAA5 samples required. The commissioner shall approve all instances of multiple wells that are considered a single treatment plant because they draw water from a single aquifer.
(3) Failure to monitor:
(A) in accordance with the monitoring plan required under subsection (f) is a monitoring violation; and
(B) will be treated as a violation for the entire period covered by the annual average where compliance is based on a running annual average of monthly or quarterly samples or averages and the ~~system's~~ **PWS's** failure to monitor makes it impossible to determine compliance with MCLs or MRDLs.
(4) ~~Systems~~ **A PWS** may use only data collected under the provisions of subsection (b) or 40 CFR 141.140 through 40 CFR 141.144* to qualify for reduced monitoring.

(b) Monitoring requirements for disinfection byproducts are as follows:
(1) TTHM and HAA5 monitoring requirements are as follows:
(A) For routine monitoring, ~~systems~~ **a PWS** shall monitor at the frequency indicated in the following table:

ROUTINE MONITORING FREQUENCY FOR TTHM AND HAA5		
Type of System	Minimum Monitoring Frequency	Sample Location in the Distribution System
Subpart H system serving at least 10,000 persons	4 water samples per quarter per treatment plant	At least 25% of all samples collected each quarter at locations representing maximum residence time. Remaining samples taken at locations representative of at least average residence time in the distribution system and representing the entire distribution system, taking into account number of persons served, different sources of water, and different treatment methods[1].
Subpart H system serving from 500 to 9,999 persons	1 water sample per quarter per treatment plant	Locations representing maximum residence time[1].
Subpart H system serving fewer than 500 persons	1 sample per year per treatment plant during	Locations representing maximum residence time[1]. If the sample (or average of annual

	month of warmest water temperature	samples, if more than one sample is taken) exceeds the MCL, the **Subpart H** system shall increase monitoring to 1 sample per treatment plant per quarter, taken at a point reflecting the maximum residence time in the distribution system, until the **Subpart H** system meets reduced monitoring criteria in clause (D).
~~System~~ **PWS** using only ground water not under direct influence of surface water using chemical disinfectant and serving at least 10,000 persons	1 water sample per quarter per treatment plant[2]	Locations representing maximum residence time[1].
~~System~~ **PWS** using only ground water not under direct influence of surface water using chemical disinfectant and serving fewer than 10,000 persons	1 sample per year per treatment plant[2] during month of warmest water temperature	Locations representing maximum residence time[1]. If the sample (or average of annual samples, if more than 1 sample is taken) exceeds the MCL, the ~~system~~ **PWS using only ground water not under direct influence of surface water** shall increase monitoring to 1 sample per treatment plant per quarter, taken at a point reflecting the maximum residence time in the distribution system, until the ~~system~~ **PWS** meets criteria in clause (D) for reduced monitoring.
[1]If a ~~system~~ **PWS** elects to sample more frequently than the minimum required, at least twenty-five percent (25%) of all samples collected each quarter, including those taken in excess of the required frequency, must be taken at locations that represent the maximum residence time of the water in the distribution system. The remaining samples must be taken at locations representative of at least average residence time in the distribution system.		
[2]Multiple wells drawing water from a single aquifer may be considered one (1) treatment plant for determining the minimum number of samples required.		

(B) ~~Systems~~ **A PWS** may reduce monitoring, except as otherwise provided, in accordance with the following table:

REDUCED MONITORING FREQUENCY FOR TTHM AND HAA5		
IF YOU ARE A:	AND YOU HAVE MONITORED AT LEAST ONE YEAR AND YOUR:	YOU MAY REDUCE MONITORING TO THIS LEVEL:
Subpart H system serving at least 10,000 persons that has a source water annual average TOC level, before any treatment, ≤ 4.0 mg/L	TTHM annual average ≤ 0.040 mg/L and HAA5 annual average ≤0.030 mg/L	1 sample per treatment plant per quarter at distribution system location reflecting maximum residence time
Subpart H system serving from 500 to 9,999 persons that has a source water annual average TOC level, before any treatment, ≤ 4.0 mg/L	TTHM annual average ≤ 0.040 mg/L and HAA5 annual average ≤0.030 mg/L	1 sample per treatment plant per year at distribution system location reflecting maximum residence time during month of warmest water temperature. NOTE: Any Subpart H system serving fewer than 500 persons may not reduce its monitoring to less than 1 sample per treatment plant per year.
~~System~~ **PWS** using only ground water not under direct influence of surface water using chemical disinfectant and serving at least 10,000 persons	TTHM annual average ≤ 0.040 mg/L and HAA5 annual average ≤0.030 mg/L	1 sample per treatment plant per year at distribution system location reflecting maximum residence time during month of warmest water temperature
~~System~~ **PWS** using only ground water not under direct influence of surface	TTHM annual average ≤0.040 mg/L and HAA5	1 sample per treatment plant per 3 year monitoring cycle at distribution system

water using chemical disinfectant and serving fewer than 10,000 persons	annual average ≤0.030 mg/L for 2 consecutive years or TTHM annual average ≤0.020 mg/L and HAA5 annual average ≤0.015 mg/L for 1 year	location reflecting maximum residence time during month of warmest water temperature, with the 3 year cycle beginning on January 1 following quarter in which ~~system~~ **PWS using only ground water not under direct influence of surface water** qualifies for reduced monitoring

(C) Beginning April 1, 2008, or earlier if specified by the commissioner, in order to qualify for reduced monitoring for TTHM and HAA5 under clause (B), Subpart H systems not monitoring under the provisions of subsection (d), shall meet the following requirements:

(i) Take monthly TOC samples every thirty (30) days at a location before any treatment.

(ii) In addition to meeting other criteria for reduced monitoring in clause (B), the source water TOC running annual average must be less than or equal to four and zero-tenths (4.0) milligrams per liter (based on the most recent four (4) quarters of monitoring) on a continuing basis at each treatment plant to reduce or remain on reduced monitoring for TTHM and HAA5.

(iii) Once qualified for reduced monitoring for TTHM and HAA5 under clause (B), a **Subpart H** system may reduce source water TOC monitoring to quarterly TOC samples taken every ninety (90) days at a location before any treatment.

(D) ~~Systems~~ **A PWS** on a reduced monitoring schedule shall comply with the following:

(i) ~~Systems~~ **A PWS** may remain on the reduced schedule as long as the:

(AA) average of all samples taken in the year (for ~~systems~~ **a PWS** that must monitor quarterly); or

(BB) result of the sample (for ~~systems~~ **a PWS** that must monitor not more frequently than annually);

is not more than sixty-thousandths (0.060) milligram per liter and forty-five thousandths (0.045) milligram per liter for TTHMs and HAA5, respectively.

(ii) ~~Systems~~ **A PWS** that ~~do~~ **does** not meet the levels specified under item (i) shall resume monitoring at the frequency identified in the table contained in clause (A) (minimum monitoring frequency column) in the quarter immediately following the monitoring period in which the ~~system~~ **PWS** exceeds those levels.

(iii) For ~~systems~~ **a PWS** using only ground water not under the direct influence of surface water and serving fewer than ten thousand (10,000) persons, if either the:

(AA) TTHM annual average is greater than eighty-thousandths (0.080) milligram per liter; or

(BB) HAA5 annual average is greater than sixty-thousandths (0.060) milligram per liter;

the ~~system~~ **PWS using only ground water not under the direct influence of surface water** shall go to the increased monitoring identified in the table contained in clause (A) (sample location column) in the quarter immediately following the monitoring period in which the ~~system~~ **PWS using only ground water not under the direct influence of surface water** exceeds those levels.

(E) ~~Systems~~ **A PWS** on increased monitoring may return to routine monitoring if, after at least one (1) year of monitoring, ~~their:~~ **the:**

(i) TTHM annual average is equal to or less than sixty-thousandths (0.060) milligram per liter; and

(ii) HAA5 annual average is equal to or less than forty-five thousandths (0.045) milligram per liter.

(F) A ~~system~~ **PWS** may return to routine monitoring at the commissioner's discretion.

(2) CWSs and NTNCWSs using chlorine dioxide for disinfection or oxidation must conduct monitoring for chlorite as follows:

(A) Routine monitoring is as follows:

(i) ~~Systems~~ **CWSs and NTNCWSs** shall take daily samples at the entrance to the distribution system. For any daily sample that exceeds the chlorite MCL, ~~the system~~ **CWSs and NTNCWSs** shall take additional samples in the distribution system the following day at the locations required by clause (B), in addition to the sample required at the entrance to the distribution system.

(ii) ~~Systems~~ **CWSs and NTNCWSs** shall take a three (3) sample set each month in the distribution system. ~~The system~~ **CWSs and NTNCWSs** shall take one (1) sample at each of the following locations:

(AA) Near the first customer.

(BB) At a location representative of average residence time.

(CC) At a location reflecting maximum residence time in the distribution system.

Any additional routine sampling must be conducted in the same manner (as three (3) sample sets, at the specified locations). ~~The system~~ **CWSs and NTNCWSs** may use the results of additional monitoring conducted under clause (B) to meet the requirement for monitoring in this clause.

(B) On each day following a routine sample monitoring result that exceeds the chlorite MCL at the entrance to the distribution system, ~~the system~~ **CWSs and NTNCWSs** shall take three (3) chlorite distribution system samples at the following locations:

(i) As close to the first customer as possible.

(ii) In a location representative of average residence time.

(iii) As close to the end of the distribution system as possible at a point reflecting maximum residence time in the distribution system.

(C) Monitoring for chlorite may be reduced as follows:

(i) Chlorite monitoring at the entrance to the distribution system required by clause (A)(i) may not be reduced.

(ii) Chlorite monitoring in the distribution system required by clause (A)(ii) applies as follows:

(AA) Chlorite monitoring may be reduced to one (1) three (3) sample set per quarter after one (1) year of monitoring where no individual chlorite sample taken in the distribution system under clause (A)(ii) has exceeded the chlorite MCL and the ~~system~~ **CWSs or NTNCWSs** has not been required to conduct monitoring under clause (B).

(BB) ~~The system~~ **CWSs and NTNCWSs** may remain on the reduced monitoring schedule specified under subitem (AA) unless one (1) of the three (3) individual chlorite samples taken monthly in the distribution system under clause (A)(ii) exceeds the chlorite MCL or the ~~system~~ **CWSs or NTNCWSs** is required to conduct monitoring under clause (B), at which time the ~~system~~ **CWSs or NTNCWSs** shall revert to routine monitoring.

(3) Monitoring for bromate is as follows:

(A) CWSs and NTNCWSs using ozone for disinfection or oxidation shall take:

(i) one (1) sample per month for each treatment plant **using ozone** in the ~~system~~ **CWS or NTNCWS;** ~~using ozone;~~ and

(ii) the samples required under item (i) monthly at the entrance to the distribution system while the ozonation system is operating under normal conditions.

(B) Until March 31, 2009, ~~systems~~ **a PWS** required to analyze for bromate may reduce monitoring from monthly to quarterly under the following conditions:

(i) The ~~system~~ **PWS** demonstrates that the average source water bromide concentration is less than five-hundredths (0.05) milligram per liter based upon representative monthly bromide measurements for one (1) year.

(ii) The ~~system~~ **PWS** may remain on reduced bromate monitoring unless the running annual average source water bromide concentration, computed quarterly, is equal to or greater than five-hundredths (0.05) milligram per liter based upon representative monthly measurements.

(iii) If the running annual average source water bromide concentration is equal to or greater than five-hundredths (0.05) milligram per liter, the ~~system~~ **PWS** shall resume routine monitoring required by clause (A) in the month following the result.

(C) Beginning April 1, 2009, a ~~system~~ **PWS** may no longer use the provisions of clause (B) to qualify for reduced monitoring but may be eligible for reduced monitoring according to the following:

(i) A ~~system~~ **PWS** required to analyze for bromate may reduce monitoring from monthly to quarterly, if the ~~system's~~ **PWS's** running annual average bromate concentration is less than or equal to twenty-five ten-thousandths (0.0025) milligrams per liter based on monthly bromate measurements under clause (A) for the most recent four (4) quarters, with samples analyzed using EPA Method 317.0, Revision 2.0, EPA Method 326.0, or EPA Method 321.8.

(ii) If a ~~system~~ **PWS** has qualified for reduced bromate monitoring under clause (B), that ~~system~~ **PWS** may remain on reduced monitoring as long as the running annual average of quarterly bromate samples is less than or equal to twenty-five ten-thousandths (0.0025) milligrams per liter based on samples analyzed using EPA Method 317.0, Revision 2.0, EPA Method 326.0, or EPA Method 321.8.

(iii) If the running annual average bromate concentration is greater than twenty-five ten-thousandths (0.0025) milligrams per liter, the ~~system~~ **PWS** shall resume routine monitoring required by clause (A)(i).

(c) Monitoring requirements for disinfectant residuals are as follows:

(1) Monitoring for chlorine and chloramines is as follows:

(A) **Until March 31, 2016,** CWSs and NTNCWSs that use chlorine or chloramines shall ~~comply with the following: (i) The systems shall~~ measure the residual disinfectant level in the distribution system at the same points and at the same time as total coliforms are sampled, as specified in 327 IAC 8-2-8.

(B) Beginning April 1, 2016, CWSs and NTNCWs that use chlorine or chloramines shall measure the residual disinfectant level in the distribution system at the same points and at the same time as total coliforms are sampled, as specified in 40 CFR 141.854 through 40 CFR 141.858*.

~~(ii)~~ **(C)** Subpart H systems may use the results of residual disinfectant concentration sampling conducted under 327 IAC 8-2-8.8(d) for ~~systems~~ **PWSs** that filter instead of taking separate samples.

~~(B)~~ **(D)** Monitoring for chlorine or chloramines may not be reduced.

(2) Monitoring for chlorine dioxide is as follows:

(A) CWSs, NTNCWSs, and TWSs that use chlorine dioxide for disinfection or oxidation shall comply with the following:

(i) The ~~systems~~ **CWSs, NTNCWSs, and TWSs** shall take daily samples at the entrance to ~~the~~ **their** distribution ~~system.~~ **systems.**

(ii) For any daily sample that exceeds the MRDL, ~~the system~~ **CWSs, NTNCWSs, and TWSs** shall take samples in the distribution system the following day at the locations required by clause (B) in addition to the sample required at the entrance to the distribution system.

(B) On each day following a routine sample monitoring result that exceeds the MRDL, ~~the system is~~ **CWSs, NTNCWSs, and TWSs are** required to take three (3) chlorine dioxide distribution system samples as follows:

(i) If chlorine dioxide or chloramines are used to maintain a disinfectant residual in the distribution system, or if chlorine is used to maintain a disinfectant residual in the distribution system and there are no disinfection addition points after the entrance to the distribution system, for example, no booster chlorination, ~~the system~~ **CWSs, NTNCWSs, and TWSs** shall take three (3) samples as close to the first customer as possible at intervals of at least six (6) hours.

(ii) If chlorine is used to maintain a disinfectant residual in the distribution system and there are one (1) or more disinfection addition points after the entrance to the distribution system, for example, booster chlorination, ~~the system~~ **CWSs, NTNCWSs, and TWSs** shall take one (1) sample at each of the following locations:

(AA) As close to the first customer as possible.

(BB) In a location representative of average residence time.

(CC) As close to the end of the distribution system as possible, reflecting maximum residence time in the distribution system.

(C) Chlorine dioxide monitoring may not be reduced.

(d) Monitoring requirements for disinfection byproduct precursors (DBPP) are as follows:

(1) Routine monitoring is required as follows:

(A) Subpart H systems that use conventional filtration treatment, as defined in 327 IAC 8-2-1, shall monitor each treatment plant for TOC not later than the point of combined filter effluent turbidity monitoring and representative of the treated water.

(B) ~~All systems~~ **A PWS** required to monitor under this subdivision shall also monitor for TOC in the source water before any treatment at the same time as monitoring for TOC in the treated water. These samples, source water and treated water, are referred to as paired samples.

(C) At the same time as the source water sample is taken, ~~all systems~~ **a PWS** shall monitor for alkalinity in the source water before any treatment.

(D) ~~Systems~~ **A PWS** shall take one (1) paired sample and one (1) source water alkalinity sample per month per plant at a time representative of normal operating conditions and influent water quality.

(2) Subpart H systems with an average treated water TOC of less than:

(A) two and zero-tenths (2.0) milligrams per liter for two (2) consecutive years; or

(B) one and zero-tenths (1.0) milligram per liter for one (1) year;

may reduce monitoring for both TOC and alkalinity to one (1) paired sample and one (1) source water alkalinity sample per plant per quarter. The **Subpart H** system shall revert to routine monitoring in the month following the quarter when the annual average treated water TOC is greater than or equal to two and zero-tenths (2.0) milligrams per liter.

(e) ~~Systems~~ **A PWS** required to analyze for bromate may reduce bromate monitoring from monthly to once per quarter if the ~~system~~ **PWS** demonstrates that the average source water bromide concentration is less than five-hundredths (0.05) milligram per liter based upon representative monthly measurements for one (1) year. ~~The system~~ **A PWS** shall continue bromide monitoring to remain on reduced bromate monitoring.

(f) Each ~~system~~ **PWS** required to monitor under this section shall develop and implement a monitoring plan as follows:

(1) The ~~system~~ **PWS** shall maintain the plan and make it available for inspection by the commissioner and the general public not later than thirty (30) days following the applicable compliance dates in section 4(b) and 4(c) of this rule.

(2) All Subpart H systems serving more than three thousand three hundred (3,300) people shall submit a copy of the monitoring plan to the commissioner not later than the date of the first report required under section 8 of this rule.

(3) The commissioner may also require any other ~~system~~ **PWS** to submit a monitoring plan.

(4) After review, the commissioner may require changes in any plan ~~elements.~~ **element.**

(5) The plan must include, at a minimum, the following elements:

(A) Specific locations and schedules for collecting samples for any parameters included in this section.

(B) How the ~~system~~ **PWS** will calculate compliance with MCLs, MRDLs, and treatment techniques.

(C) If:

(i) approved for monitoring as a consecutive system; or
(ii) providing water to a consecutive system;
the sampling plan must reflect the entire distribution system.

~~*40 CFR 141.140 through 40 CFR 141.144 is~~ ***These documents are** incorporated by reference. ~~and is available for copying~~ **Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review** at the Indiana Department of Environmental Management, Office of ~~Water Quality,~~ **Legal Counsel,** 100 North Senate Avenue, ~~Room N1255,~~ **Thirteenth Floor,** Indianapolis, Indiana 46204.

(Water Pollution Control Division; 327 IAC 8-2.5-6; filed May 1, 2003, 12:00 p.m.: 26 IR 2844; errata filed Feb 6, 2006, 11:15 a.m.: 29 IR 1937; filed Oct 24, 2006, 3:03 p.m.: 20061122-IR-327050255FRA; errata filed Dec 6, 2006, 10:10 a.m.: 20061227-IR-327050255ACA; filed May 7, 2010, 9:30 a.m.: 20100602-IR-327080198FRA)

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